OCEANO COMMUNITY SERVICES DISTRICT

STORM WATER CAPTURE AND GROUNDWATER RECHARGE PROJECT – 19TH STREET

PLANS AND DRAWINGS

FOR

OCEANO, CA CONTRACT NO. 2023-01

(vi) Plans and Drawings



<u>LEGEND</u>

	<u>EXISTING</u>	<u>PROPOSED</u>
TRACT BOUNDARY PROPERTY LINE RIGHT-OF-WAY CURB		
CURB & GUTTER		
FENCE DAYLIGHT LINE EASEMENT FLOWLINE RETAINING WALL	TOP OF SLOPE	
SLOPE		
CONTOURS		\sim
ATT LINE CHARTER LINE WATER MAIN SANITARY SEWER LINE FORCE MAIN STORM DRAIN LINE GAS LINE ELECTRIC LINE OVERHEAD WIRES FIBER OPTICS TELEPHONE UNDERGROUND TELEPHONE JOINT TRENCH TYPICAL LATERALS WATER VALVE WATER METER GAS METER FIRE HYDRANT STREET LIGHT PG&E BOX TRANSFORMER MONUMENT STORM DRAIN INLET CURB INLET BACK WATER VALVE DOUBLE DETECTOR CHECK V FIRE HYDRANT AIR RELEASE VALVE THRUST BLOCK POWER POLE FOUR-WAY SIGN TWO-WAY SIGN CLEANOUT SDMH SSMH	ATT	$ \begin{array}{c} & W \\ & SS \\ & FM \\ & SD \\ & G \\ & E \\ & OH \\ & FO \\ & T \\ & U \\ & T \\ & I \\$

AIR RELEASE VALVE	ARV
ASPHALT CONCRETE	AC
ASBESTOS CONCRETE PIPE	ACP
BEGIN CURB RETURN	BCR
BEGIN CURVE	BC
BEGIN VERTICAL CURVE	BVC
CENTERLINE	CL
END CURB RETURN	ECR
END CURVE	EC
EDGE OF TRAVELED WAY	ETW
END VERTICAL CURVE	EVC
FINISHED GRADE	FG
FINISHED SURFACE	FS
FLOW LINE	FL
GRADE BREAK	GB
HIGH POINT	HP
INVERT	INV
POINT OF CONNECTION	POC
POINT OF REVERSE CURVE	PRC
PROPERTY LINE	PL
PUBLIC UTILITY EASEMENT	PUE
RIGHT-OF-WAY	ROW
TOP OF CURB	тс
TOP OF WALL	ΤW

CONTACT INFORMATION

OWNER: OCEANO COMMUNITY SERVICES DISTRICT PUBLIC WORKS DEPARTMENT ATTN: WILL CLEMENS 1655 FRONT STREET OCEANO, CA 93445 PHONE: (805) 481-6730

CIVIL ENGINEER: CANNON ATTN: JOHN W. EVANS 1050 SOUTHWOOD DRIVE SAN LUIS OBISPO, CA 93401 PHONE: (805) 544-7407

LANDSCAPE ARCHITECT: KTU&A

ATTN: BROOKE WHALEN 540 E. BETTERAVIA RD., SUITE D 122 SANTA MARIA, CA 93454 PHONE:(619) 294-4477

GEOTECH ENGINEER: EARTH SYSTEMS PACIFIC ATTN: ROBERT DOWN 4378 OLD SANTA FE ROAD SAN LUIS OBISPO, CA 93401 PHONE: (805) 544-3276

OCEANO ELEMENTARY SCHOOL INFILTRATION AND FRONTAGE IMPROVEMENTS OCEANO COMMUNITY SERVICES DISTRICT OCEANO, CALIFORNIA



SITE MAP

EXF



SECTION AND DETAIL NUMBERING SYSTEM

SHEET X

 SECTION LETTER
 DRAWING ON WHICH SECTION APPEARS

STREET SECTION

- SECTION TITLE

SCALE: 1"=X"

DRAWING FROM WHICH

SECTION IS TAKEN

- SECTION LETTER

IMPROVEMENT PLAN LIMITS

- (1) SECTION CUT ON DRAWING
- SHEET X.
- (2) ON SHEET Y, THIS SECTION IS IDENTIFIED AS
- (3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER, EXCEPT THAT DETAILS ARE IDENTIFIED BY NUMBER RATHER THAN LETTER.

	REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY	OCEANO ELEMENTARY SCHOOL
EW R. ROUTE								Cannon
). 75626 06/30/24								1050 Southwood Drive
								San Luis Obispo, CA 93401 DRAWN BY DATE CA JOB NO. P 805.544.7407 F 805.544.3863 AR 05/31/2023 210534
OF CALIFOT								IHESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE OF THE SPECIFIED PROJECT AND SHALL NOT BE USED OTHERWISE OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CANNON. CHECKED BY SCALE SHEET N.T.S. 1 OF 29

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS NGS SURVEY CONTROL FV0418 "T 532". HAVING A PUBLISHED NAVD88 ELEVATION OF 26.42'

BASIS OF BEARING

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, NAD83(1992) EPOCH 1991.35. IN ACCORDANCE WITH THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 88001-8819; SAID COORDINATES AND BEARING ARE BASED LOCALLY UPON FIELD-OBSERVED TIE TO THE FOLLOWING NGS SURVEY CONTROL FV2048 "HPGN CA 05 05". N: 2,226,903.13 E: 5788621.06

STANDARD SPECIFICATIONS

MOST RECENT STANDARD SPECIFICATIONS FOR THE OCEANO COMMUNITY SERVICES DISTRICT (OCSD), SAN LUIS OBISPO COUNTY, AND CALTRANS SHALL APPLY. THERE MAY BE INSTANCES WHERE REFERENCES HAVE BEEN MADE TO SPECIFIC SECTIONS OF THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – GREEN BOOK". FOR THESE INSTANCES ONLY, THE GREEN BOOK SHALL TAKE PRECEDENCE.

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- 10 SITE CROSS-SECTIONS
- 11 HORIZONTAL CONTROL PLAN
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- 14 IRRIGATION PLAN
- 15 IRRIGATION NOTES & LEGEND
- 16 IRRIGATION DETAILS
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Approved for construction upon issuance of encroachment permit ENC20220255 and conditional upon compliance with all permit requirements and conditions.

SLO COUNTY TRAFFIC CONTROL NOTES

A. THE ENCROACHMENT PERMIT APPLICANT SHALL BE RESPONSIBLE TO ASSURE THAT THE APPROPRIATE EXISTING TRAFFIC CONTROLS REMAIN IN PLACE AND FUNCTIONAL DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL COVER ANY CONFLICTING SIGNS THAT EXIST ALONG THE ROADWAY.

B. NO WORK SHALL COMMENCE WITHOUT THE CONSTRUCTION SIGNS INSTALLED AND OTHER NECESSARY TRAFFIC CONTROL DEVICES ON SITE. STATIONARY MOUNTED CONSTRUCTION AREA SIGNS SHALL BE FLUORESCENT ORANGE, AND ALL SIGNAGE AND MARKINGS MUST CONFORM WITH THE CALIFORNIA MANUAL ON TRAFFIC CONTROL DEVICES (CAMUTCD) REQUIREMENTS.

C. NO LANE CLOSURES ARE PERMITTED ON THE ROADS AND BETWEEN THE TIMES LISTED IN THE DEPARTMENT'S "LANE CLOSURE RESTRICTION LIST" (LISTED BELOW).

D. AT THE CONCLUSION OF EACH WORKDAY, ALL PAVED TRAVELED-WAY SURFACES SHALL BE RESTORED TO AN ALL-WEATHER, TRAVERSABLE CONDITION. THERE SHALL NOT BE A DROP-OFF ALONG THE EDGE OF TRAVELED WAY >0.15-FEET. 'LOW SHOULDER" SIGNS SHALL BE PLACED ALONG THE TRAVELED WAY WHERE THERE IS ANY DROP-OFF. DROP-OFFS >0.15-FEET SHALL REQUIRE EITHER:

a. BACKFILLING THE DROP-OFF TO A MINIMUM 4:1 SLOPE: b. PROVIDING APPROPRIATE STEEL PLATES OVER EXCAVATION;

. PROVIDING TEMPORARY CONCRETE RAILING ALONG THE WORK ZONE IN CONFORMANCE WITH THE STATE STANDARD SPECIFICATIONS.

E. EXCAVATIONS BEYOND 10-FEET FROM THE EDGE OF TRAVELED WAY MAY UTILIZE PORTABLE DELINEATORS AT APPROPRIATE SPACING, ALONG WITH "OPEN TRENCH" SIGNS.

F. WHERE STEEL PLATES ARE USED, THEY SHALL BE PINNED, AND HAVE A COLD-MIX SLOPE OF 12:1 PLACED ON ALL SIDES. FOR ROADWAYS WITH TRAVEL SPEEDS OVER 40 MPH, THE EXISTING PAVEMENT SHALL BE MILLED. AND THE STEEL PLATE SET FLUSH TO THE ROAD SURFACE. THEY SHALL BE FRICTION-COATED FOR TRACTION. APPROPRIATE WARNING SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE CAMUTCD.

G. PEDESTRIAN ACCESS SHALL BE AFFORDED THROUGH THE WORK AREA ON COUNTY STREETS AND ROADS, EITHER BY PROVIDING NECESSARY FACILITIES FOR SAFE AND VIABLE ACCESS, OR BY PROVIDING APPROPRIATE CAMUTCD ADVANCE WARNING TO PEDESTRIANS TO USE ALTERNATE ROUTES. BICYCLE ROUTES AND LANES, WHEN IMPACTED BY CONSTRUCTION, SHALL BE SIGNED TO AFFORD SAFE PASSAGE THROUGH THE WORK ZONE OR TO DESIGNATE ALTERNATE ROUTES. FOR BOTH PEDESTRIANS AND BICYCLES, SURFACES SHALL BE MAINTAINED FREE OF LOOSE DEBRIS AND GRAVEL.

H. NO CONSTRUCTION EQUIPMENT OR MATERIALS SHALL BE PARKED OR STORED WITHIN 10-FEET OF THE EDGE OF THE TRAVELED WAY. WHEN CONSTRUCTION EQUIPMENT OR MATERIALS ARE STORED WITHIN THE RIGHT OF-WAY, THE SHOULDER AREA SHALL BE SIGNED AS CLOSED, AND PORTABLE DELINEATORS SHALL BE USED TO MARK A TAPER IN ADVANCE OF THE MATERIAL OR EQUIPMENT.

I. REMOVAL OF EXISTING PAVEMENT STRIPING OR MARKINGS SHALL BE BY SANDBLASTING OR GRINDING. WHEN THE CHANGE OF POSITION WILL BE GREATER THAN 2-FEET, THE REMOVED STRIPING SHALL BE FURTHER OBSCURED BY USE OF A CHIP SEAL, AS REQUIRED BY STATE STANDARD SPECIFICATIONS. THE CHIP SEAL SHALL EXTEND THE FULL WIDTH OF THE LANE OR ROADWAY. OR AS DIRECTED BY THE DEPARTMENT.

J. PARKING RESTRICTIONS SHALL BE POSTED 24-HOURS BEFORE ANY WORK STARTS. POSTING SHALL BE DONE BY THE CONTRACTOR.

K. ALL PRIVATE DRIVEWAYS AND SIDE STREETS SHALL BE KEPT OPEN AT ALL TIMES, EXCEPT WHEN CONSTRUCTION TAKES PLACE IMMEDIATELY IN FRONT OF THE DRIVEWAY OR SIDE STREET.

L. ANY WORK THAT DISTURBS NORMAL TRAFFIC SIGNAL OPERATIONS SHALL BE COORDINATED WITH THE DEPARTMENT AT LEAST 3-BUSINESS DAYS PRIOR TO BEGINNING THE WORK INVOLVING THE SIGNAL. THE CONTRACTOR SHALL REPLACE ALL TRAFFIC SIGNAL LOOP DETECTORS, DAMAGED DURING CONSTRUCTION, WITHIN 5-DAYS OF THE COMPLETION OF CONSTRUCTION INVOLVING THE SIGNAL. ANY DAMAGE TO EXISTING IN-PAVEMENT LOOP DETECTORS WILL REQUIRE REPLACEMENT WITHIN 5-DAYS OF THE START OF ANY TRENCH CUT WORK. INTERSECTION DETECTION SHALL BE REPLACED WITH VIDEO DETECTION SYSTEM(S) ACCEPTABLE TO THE DEPARTMENT. ALL COMPONENTS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO COMMENCING THE TRENCH WORK WHICH WILL AFFECT THE LOOP(S). ALL COSTS, INCLUDING DEPARTMENT OPERATIONS TIME, SHALL BE PAID BY THE DEVELOPER.

M. ALL DELINEATORS SHALL BE EQUIPPED WITH NIGHTTIME REFLECTIVE BANDS AND SPACED NO GREATER THAN 50-FOOT INTERVALS ALONG TAPERS, LANE CONTROL, AND/OR EDGE OF WORK ZONE.

N. THE OPERATOR OF ANY TRANSIT OPERATION AFFECTED BY THE WORK SHALL BE NOTIFIED 2-WORKING DAYS

PRIOR TO WORK COMMENCING. O. ALL FLAGGERS SHALL HOLD CURRENT CERTIFICATIONS. AS DEFINED UNDER CAL OSHA CONSTRUCTION SAFETY ORDER SECTION 1599. ALL FLAGGERS ON THE ROADWAY SHALL BE TRAINED BY QUALIFIED AND EXPERIENCED PERSONNEL TO THE ASPECTS NOTED IN SECTION 1599. THE DEVELOPER OR PROJECT ENGINEER SHALL BE RESPONSIBLE TO ENSURE THAT THE CONTRACTOR OR OTHER AGENTS UTILIZE TRAINED PERSONNEL ONLY. ALL WORKERS WITHIN THE ROADWAY SHALL WEAR TYPE 2 CAL-OSHA HIGH-VISIBILITY

NOTE: CONTRACTOR TO PREPARE AND SUBMIT TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION

VESTS.

SLO COUNTY GENERAL NOTES

A. NO CONSTRUCTION SHALL BE STARTED WITHOUT PLANS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS (DEPARTMENT). THE DEPARTMENT SHALL BE NOTIFIED AT LEAST 24-HOURS PRIOR TO STARTING OF CONSTRUCTION AND OF THE TIME LOCATION OF THE PRECONSTRUCTION CONFERENCE. ANY CONSTRUCTION PERFORMED WITHOUT APPROVED PLANS OR PRIOR NOTIFICATION TO THE DEPARTMENT MAY BE REJECTED AND WILL BE AT THE CONTRACTOR'S AND/OR OWNER'S RISK.

B. FOR ANY CONSTRUCTION PERFORMED THAT IS NOT IN COMPLIANCE WITH PLANS OR PERMITS APPROVED FOR THE PROJECT THE DEPARTMENT MAY REVOKE ALL ACTIVE PERMITS AND RECOMMEND THAT COUNTY CODE ENFORCEMENT PROVIDE A WRITTEN NOTICE OR STOP WORK ORDER IN ACCORDANCE WITH SECTION 22.52.140 [OR 23.10] OF THE LAND USE ORDINANCE.

C. ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE MOST CURRENT COUNTY'S PUBLIC IMPROVEMENT STANDARDS AND ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENT.

D. THE PROJECT OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND/OR MAINTAINING ALL WEATHER ACCESS AT ALL TIMES TO EXISTING PROPERTIES LOCATED IN THE VICINITY OF WORK. ADDITIONALLY, THEY SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING SERVICES, INCLUDING UTILITY, GARBAGE COLLECTION, MAIL DISTRIBUTION, ETC., TO ALL EXISTING PROPERTIES LOCATED IN THE VICINITY OF WORK.

E. ON-SITE HAZARDS TO PUBLIC SAFETY SHALL BE SHIELDED BY CONSTRUCTION FENCING. FENCING SHALL BE MAINTAINED BY THE DEVELOPER AND CONTRACTOR UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND OCCUPIED, POTENTIAL HAZARDS HAVE BEEN MITIGATED, OR ALTERNATIVE PROTECTIVE MEASURES HAVE BEEN INSTALLED.

F. SOILS TESTS SHALL BE DONE IN ACCORDANCE WITH THE COUNTY'S PUBLIC IMPROVEMENT STANDARDS. ALL TESTS MUST BE MADE WITHIN 15-DAYS PRIOR TO THE PLACING MATERIAL. THE TEST RESULTS SHALL CLEARLY INDICATE THE LOCATION AND SOURCE OF THE MATERIAL.

PLACEMENT OF THE NEXT MATERIAL LIFT.

H. SUBGRADE MATERIAL SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 95-PERCENT IN THE ZONE BETWEEN FINISHED SUBGRADE ELEVATION AND A MINIMUM OF 1-FOOT BELOW. ALL MATERIAL IN FILL SECTIONS BELOW THE ZONE MENTIONED ABOVE SHALL BE COMPACTED TO 90-PERCENT RELATIVE COMPACTION

I. A REGISTERED CIVIL ENGINEER SHALL CERTIFY THAT THE IMPROVEMENTS, WHEN COMPLETED, ARE IN ACCORDANCE WITH THE PLANS PRIOR TO THE REQUEST TO THE DEPARTMENT FOR A FINAL INSPECTION. RECORD DRAWINGS SHALL BE PREPARED AFTER CONSTRUCTION IS COMPLETED. THE CIVIL ENGINEER CERTIFYING THE IMPROVEMENTS AND PREPARING AS-BUILT PLANS SHOULD BE PRESENT WHEN THE FINAL INSPECTION IS MADE BY THE DEPARTMENT.

J. AN ENGINEER OF WORK AGREEMENT AND AN ENGINEER CHECKING AND INSPECTION AGREEMENT ARE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE DEPARTMENT SHALL BE NOTIFIED IN WRITING OF ANY CHANGES TO THE ENGINEER OF WORK AGREEMENT. CONSTRUCTION SHALL NOT PROCEED WITHOUT AN ENGINEER OR WORK.

K. ALL UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION. L. AN ENCROACHMENT PERMIT ISSUED BY THE DEPARTMENT IS REQUIRED FOR ALL WORK DONE WITHIN THE COUNTY RIGHT-OF-WAY. THE ENCROACHMENT PERMIT MAY ESTABLISH ADDITIONAL CONSTRUCTION,

M. THE ENCROACHMENT INSPECTOR, ACTING ON BEHALF OF THE DEPARTMENT, MAY REQUIRE REVISIONS IN THE PLANS TO SOLVE UNFORESEEN PROBLEMS THAT MAY ARISE IN THE FIELD. ALL REVISIONS SHALL BE SUBJECT TO THE APPROVAL OF THE DEVELOPER'S ENGINEER OF WORK.

N. THE STRUCTURAL SECTION SHALL BE BASED ON SOILS TESTS TAKEN AT THE TIME OF CONSTRUCTION AND USING A TRAFFIC INDEX OF FOR (ROAD NAME). THE STRUCTURAL SECTION SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO ROAD CONSTRUCTION.

O. HYDRO-SEEDING OR OTHER PERMANENT EROSION CONTROL SHALL BE PLACED AND ESTABLISHED WITH 90-PERCENT COVERAGE ON ALL DISTURBED SURFACES (OTHER THAN PAVED OR GRAVEL SURFACES) PRIOR TO THE FINAL INSPECTION.

P. FOR ANY PUBLIC IMPROVEMENTS TO BE MAINTAINED BY THE COUNTY, IF ENVIRONMENTAL PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS, THE CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD/STATE WATER RESOURCES CONTROL BOARD, OR THE CALIFORNIA DEPARTMENT OF FISH & GAME ARE REQUIRED, THE DEVELOPER SHALL: 1. SUBMIT A COPY OF ALL SUCH COMPLETED PERMITS TO THE DEPARTMENT OR, 2. DOCUMENT THAT THE REGULATORY AGENCIES DETERMINED THAT SAID PERMIT IS NOT REQUIRED. PRIOR TO ACCEPTANCE OF THE COMPLETED IMPROVEMENTS FOR COUNTY MAINTENANCE AND RELEASE OF IMPROVEMENT SECURITY. ANY MITIGATION MONITORING REQUIRED BY SAID PERMITS WILL REMAIN THE RESPONSIBILITY OF THE DEVELOPER.

Q. WHEN THE PROJECT SITE EARTHWORK IS NOT INTENDED TO BALANCE THEN A SEPARATE GRADING PERMIT FOR THE SENDING OR RECEIVING PROPERTY MAY BE REQUIRED. A COPY OF THE PERMIT/S OR EVIDENCE THAT NO PERMITS ARE REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO COMMENCING PROJECT EARTHWORK

R. ALL WIRE AND GAS UTILITY CONNECTIONS, DISTRIBUTION LINES, AND SERVICE LOCATIONS SHOWN ON THESE PLANS ARE FOR INFORMATION ONLY AND SHOULD NOT BE CONSIDERED FINAL DESIGN. UTILITY PURVEYORS MAY NEED TO ALTER THEIR DESIGN FROM WHAT IS DEPICTED HEREIN BASED UPON FUTURE DESIGN MODIFICATIONS OR DURING CONSTRUCTION. THIS MAY RESULT IN ADDITIONAL REDESIGN COSTS OR CHARGES TO THE OWNER FOR THIS WORK. NO REVISIONS TO WHAT ARE DEPICTED HEREIN SHALL BE CONSTRUCTED WITHOUT THE PRIOR APPROVAL OF THE COUNTY OF SAN LUIS OBISPO DEPARTMENT OF PUBLIC WORKS, NO ABOVE-GROUND FACILITIES SHALL BE LOCATED WHERE THEY BLOCK THE ACCESSIBLE PATH OF TRAVEL OR INTERSECTION OR DRIVEWAY SIGHT DISTANCE. PRIOR TO FINAL PROJECT ACCEPTANCE IT WILL BE THE OWNER'S RESPONSIBILITY TO VERIFY FINAL UTILITY ALIGNMENTS AND ENSURE THAT ADEQUATE EASEMENTS FOR SUCH FACILITIES ARE PROVIDED.

G. ROADWAY COMPACTION TESTS SHALL BE MADE ON SUBGRADE MATERIAL, AGGREGATE BASE MATERIAL, AND MATERIAL AS SPECIFIED BY THE SOILS ENGINEER. SAID TESTS SHALL BE MADE PRIOR TO THE

UTILITY AND TRAFFIC CONTROL REQUIREMENTS.

OCSD STANDARD CONSTRUCTION NOTES

1. APPROVED PLANS - NO CONSTRUCTION SHALL BE STARTED WITHOUT PLANS APPROVED BY THE OCEANO COMMUNITY SERVICES DISTRICT (OCSD). THE DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO STARTING OF CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PRIOR TO NOTIFICATION TO THE DISTRICT WILL BE REJECTED AND WILL BE AT THE CONTRACTOR'S AND/OR OWNER'S RISK. THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED PLANS FOR THIS PROJECT ON THE SITE AT ALL TIMES AND SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS

STANDARD SPECIFICATIONS - ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE OCSD STANDARD SPECIFICATIONS AND DRAWINGS, AND ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE OCSD.

3. INSPECTION AGREEMENT - AN EXECUTED INSPECTION AGREEMENT IS REQUIRED PRIOR TO THE START OF CONSTRUCTION.

4. INSPECTION - THE OCSD INSPECTOR, ACTING ON BEHALF OF THE DISTRICT, MAY REQUIRE REVISIONS TO THE APPROVED PLANS AND SPECIFICATIONS TO SOLVE UNFORESEEN PROBLEMS THAT MAY ARISE IN THE FIELD.

5. ENCROACHMENT PERMITS - NO WORK WITHIN A COUNTY OR CALTRANS RIGHT-OF-WAY SHALL BE PERFORMED WITHOUT AND ENCROACHMENT PERMIT.

6. UTILITY LOCATION - PRIOR TO BEGINNING ANY EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL AGENCIES INVOLVED AND SHALL LOCATE ALL FACILITIES PRIOR TO EXCAVATION IN ANY AREA. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA), TOLL FREE AT 1-800-642-2444 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

7. EXISTING UTILITIES - THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES WHERE SHOWN ON THE PLANS ARE BASED ON AVAILABLE RECORDS, AND ARE APPROXIMATE ONLY. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR LOCATING OR HAVING LOCATED ALL UNDERGROUND UTILITIES AND OTHER FACILITIES AND FOR PROTECTING THE SAME DURING THE COURSE OF CONSTRUCTING THE PROJECT. ANY DEVIATIONS FROM THE PLAN LOCATION OF ANY EXISTING FACILITIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OCSD INSPECTOR.

8. SAFETY - NEITHER THE OCEANO COMMUNITY SERVICES DISTRICT, OWNER, OR THE ENGINEER OF RECORD WILL ENFORCE SAFETY DEVICES, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL, SAFETY AND HEALTH STANDARDS, LAWS, AND **REGULATIONS**

9. INDEMNIFICATION - THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE CONDITION OF THE JOB SITE DURING THE COURSE OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS: AND THAT THE CONTRACTOR SHALL DEFEND. INDEMNITY, AND HOLD THE DISTRICT, ENGINEER OF RECORD, AND OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DISTRICT, ENGINEER OF RECORD, OWNER, OR THIRD PARTY IN VIOLATION OF THE LAW OR IN TRESPASS.

10. PROTECTION OF PROPERTY - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PUBLIC AND PRIVATE PROPERTY ADJACENT TO HIS WORK, AND SHALL EXERCISE DUE CAUTION TO AVOID DAMAGE TO SUCH PROPERTY. THE CONTRACTOR SHALL REPLACE OR REPAIR TO THEIR ORIGINAL CONDITION, ALL IMPROVEMENTS WITHIN OR ADJACENT TO THE WORK AREA WHICH ARE NOT DESIGNATED FOR REMOVAL, AND WHICH ARE DAMAGED OR REMOVED AS A RESULT OF HIS OPERATIONS

11. SITE CONDITIONS - THE CONTRACTOR SHALL CONTINUALLY REVIEW JOB SITE CONDITIONS. CONDITIONS REQUIRING CONSTRUCTION DIFFERENT FROM THAT SHOWN ON THE PLANS SHALL BE REPORTED TO THE OCSD INSPECTOR PRIOR TO PROCEEDING WITH THE AFFECTED CONSTRUCTION.

12. CONTRACTORS RECORD OF CHANGES - THE CONTRACTOR SHALL MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THE CONSTRUCTION AS SHOWN ON THESE PLANS AND SPECIFICATIONS FOR THE PURPOSE OF PROVIDING THE ENGINEER-OF-RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.

13. RECORD DRAWINGS - A REGISTERED CIVIL ENGINEER MUST CERTIFY IN ACCORDANCE WITH DRAWING N-3 THAT THE IMPROVEMENTS, WHEN COMPLETED, ARE IN CONFORMANCE WITH THE APPROVED PLANS SUBJECT TO APPROVED CHANGES. THIS CERTIFICATION SHALL BE MADE PRIOR TO THE REQUEST FOR FINAL INSPECTION. RECORD DRAWINGS ("AS-BUILTS") ARE TO BE PREPARED BY THE ENGINEER-OF-RECORD PRIOR TO FINAL ACCEPTANCE OF THE WORK BY OCSD.

14. PLAN CORRECTIONS - THE PLAN CHECK AND APPROVAL OF THESE PLANS BY OCSD DOES NOT RELIEVE THE DESIGN ENGINEER FROM ANY DISCREPANCIES, ERRORS, OR OMISSIONS WHICH MAY BECOME APPARENT PRIOR TO THE COMPLETION OF CONSTRUCTION. THE DESIGN ENGINEER OR OTHER DESIGNATED ENGINEER OF WORK SHALL BE RESPONSIBLE FOR CORRECTING ANY DESIGN DEFICIENCIES, ERRORS, OR OMISSIONS TO THE APPROVED OF THE OCSD ENGINEER IN ACCORDANCE

WITH THE OCSD STANDARD SPECIFICATIONS AND DRAWINGS.

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	San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	DRAWN BY AR	DATE 05/31/2023	CA JOB NO. 210534					
	THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE OF THE SPECIFIED PROJECT AND SHALL NOT BE USED OTHERWISE OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CANNON.	CHECKED BY	SCALE N.T.S.	SHEET 2 OF 29					



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	San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	DRAWN BY AR	DATE 05/31/2023	CA JOB NO. 210534			
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- 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101 2. MC-7200 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION
- FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS. TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3". TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF
 - ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

RETENTION SYSTEM TYPICAL STORMTECH MC-7200 SECTION SHEET 9

MC-7200 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-7200.

FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

- 2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- 3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- 4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION
- 6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 7. REQUIREMENTS FOR HANDLING AND INSTALLATION: TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS. TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3". TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED
- FROM REFLECTIVE GOLD OR YELLOW COLORS. 8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
- THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
- THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

- PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS: STONESHOOTER LOCATED OFF THE CHAMBER BED.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.

- 9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER
- ENGINEER

NOTES FOR CONSTRUCTION EQUIPMENT

- 2. THE USE OF EQUIPMENT OVER MC-7200 CHAMBERS IS LIMITED: NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
- WITH THE "STORMTECH MC-3500/MC-7200 CONSTRUCTION GUIDE".
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

WARRANTY

\L S	COMPACTION / DENSITY REQUIREMENT
	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS I 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
	NO COMPACTION REQUIRED.
	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-7200 CHAMBER SYSTEM

STORMTECH MC-7200 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A

2. STORMTECH MC-7200 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-7200 CONSTRUCTION GUIDE".

BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.

BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.

7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.

EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3

DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.

10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.

11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN

12. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

1. STORMTECH MC-7200 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-7200 CONSTRUCTION GUIDE".

NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE

WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-7200 CONSTRUCTION GUIDE".

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE

BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



	1 15" (275 mm)	. ,	
MC7200IEPP15B			1.70" (43 mm)
MC7200IEPP18T		20.36" (746 mm)	
MC7200IEPP18TW	18" (450 mm)	29.30 (740 mm)	
MC7200IEPP18B			1.97" (50 mm)
MC7200IEPP18BW			1.97 (30 mm
MC7200IEPP24T		23.05" (585 mm)	
MC7200IEPP24TW	2/1" (600 mm)	23.03 (303 mm)	
MC7200IEPP24B			2 26" (57 mm
MC7200IEPP24BW			2.20 (37 mm
MC7200IEPP30BW	30" (750 mm)		2.95" (75 mm



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	Cannon	DETAIL SHEET				
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	San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	DRAWN BY AR	DATE 05/31/2023	CA JOB NO. 210534		
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OCEANO ELEMENTARY SCHOOL SPORTS FIELD

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GENERAL NOTES

- 1. ALL IMPROVEMENTS NOT CALLED OUT TO BE REMOVED, RELOCATED, OR RECONSTRUCTED SHALL REMAIN AND BE PROTECTED IN PLACE.
- ALL EXISTING UTILITY LIDS AND MANHOLES SHALL BE ADJUSTED TO MATCH FINISHED SURFACE.
- INSTALL SECURE CHAIN-LINK CONSTRUCTION FENCING SURROUNDING INFILTRATION GALLERY AND PREVENTING ACCESS BETWEEN SPORTS FIELD AND STREETS.

CONSTRUCTION NOTES

- STORMTECH MC-7200 INFILTRATION CHAMBER GALLERY SYSTEM PER DETAILS ON SHEETS 5 AND 6, OR APPROVED EQUAL. INSTALL PER MANUFACTURER INSTRUCTIONS.
- $\langle 2 \rangle$ CURB INLET CATCH BASIN PER SLO COUNTY STD DRAWING D-2, SHEET 4. DETAIL WIDTH MODIFIED TO 6' AT INSIDE WALLS OF CATCH BASIN.
- $\left< \overline{3} \right>$ 18" HDPE SMOOTH INNER WALL STORM DRAIN PIPE
- BARRACUDA MAX S8 HYDRODYNAMIC SEPARATOR, OR APPROVED EQUAL. INSTALL PER DETAILS ON SHEETS 5 AND 6. MANHOLE PER SLO COUNTY STD DRAWING D-3, SHEET 4.
- 5 MANHOLE PER SLO COUNTY STD DRAWING D-3, SHEET 4. INSTALL HACH FL900 SERIES FLOW LOGGER PER MANUFACTURER INSTRUCTIONS, OR APPROVED EQUAL.
- 6 12' WIDE CHAINLINK ACCESS GATE PER CALTRANS STANDARD PLAN A85 AND A85A.
- $\langle 7 \rangle$ protect in place existing goal posts to remain.
- $\langle 8 \rangle$ protect in place existing 4' access gate to remain.
- 9 LIMITS OF STONE BED PER DETAILS ON SHEETS 5 AND 6. INSTALL PER MANUFACTURER INSTRUCTIONS.
- (10) ISOLATOR ROW AND INSPECTION PORT WITH LOCKING COVER PER DETAILS ON SHEETS 5 AND 6. INSTALL PER MANUFACTURER INSTRUCTIONS.
- $\langle 11 \rangle$ 18" MANIFOLD PIPE PER DETAILS ON SHEETS 5 AND 6. INSTALL PER MANUFACTURER INSTRUCTIONS.
- $\langle 12 \rangle$ LIMITS OF WOVEN FABRIC PER DETAILS ON SHEETS 5 AND 6. INSTALL PER MANUFACTURER INSTRUCTIONS.
- $\langle 13 \rangle$ INFILTRATION TREE WELL PER DETAIL 2, SHEET 3.
- $\langle 14 \rangle$ pavers per detail 5, sheet 3.
- $\langle 15 \rangle$ JOIN NEW CONCRETE TO EXISTING PER SLO COUNTY STD DWG R-4, SHEET 4.
- $\langle 16 \rangle$ ASPHALT PAVE-OUT PER SLO COUNTY STD DWG R-2A, SHEET 4 AND DETAIL 3, SHEET 3.
- $\langle 17 \rangle$ SEE LANDSCAPE PLANS FOR INTERPRETIVE SIGNAGE.

1 INCH = 10 FEET

KD. APRD BY BY		OCEANO	ELEMENTARY & FRONTAGE I	SCHOOL MPROVEMENTS		
	Cannon	STORMWATER INFILTRATION GALLERY				
	1050 Southwood Drive		OCEANO, CA			
	San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	DRAWN BY AR	DATE 05/31/2023	CA JOB NO. 210534		
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CKD. APRD BY	Cannon	OCEANO INFILTRATION SITE	ELEMENTARY & FRONTAGE I CROSS-SECT OCEANO, CA	SCHOOL MPROVEMENTS FIONS
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SLO COUNTY EROSION CONTROL NOTES

A. SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP) SHALL BE IMPLEMENTED ON ALL PROJECTS AT ALL TIMES AND SHALL INCLUDE: POLLUTANT SOURCE CONTROL, PROTECTION OF STOCKPILES, PROTECTION OF SLOPES, PROTECTION OF ALL DISTURBED AREAS, PROTECTION OF SITE ACCESS POINTS, AND PERIMETER CONTAINMENT MEASURES.

B. APPROPRIATE BMP SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF GRADING AND SITE DISTURBANCE ACTIVITIES. THE INTENT OF THE BMP SHALL BE TO PREVENT DISTURBED SEDIMENT FROM ENTERING DRAINAGE CONVEYANCES, GENERATING FUGITIVE DUST, OR MIGRATING ONTO ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY.

C. SITE INSPECTIONS AND APPROPRIATE MAINTENANCE OF ALL BMP AND EROSION CONTROL MEASURES SHALL BE CONDUCTED AND DOCUMENTED THROUGHOUT CONSTRUCTION AND ESPECIALLY PRIOR TO, DURING, AND AFTER RAIN EVENTS.

D. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL BMP AS SPECIFIED BY THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL SUCH TIME THAT THE PROJECT IS ACCEPTED AS COMPLETE BY THE COUNTY OR UNTIL THE CALIFORNIA CONSTRUCTION GENERAL PERMIT FOR STORMWATER DISCHARGE NOTICE OF TERMINATION IS APPROVED BY THE STATE WATER RESOURCES CONTROL BOARD.

E. EROSION CONTROL BMP MAY BE RELOCATED, MODIFIED, OR ADDED DEPENDING ON FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION. ADDITIONAL BMP SHALL BE INSTALLED AT THE DISCRETION OF THE SITE SUPERINTENDENT, ENGINEER OF WORK, COUNTY INSPECTOR, QUALIFIED SWPPP PRACTITIONER (QSP), OR STATE WATER RESOURCES CONTROL BOARD. GUIDELINES FOR INSTALLING APPROPRIATE EROSION CONTROL DEVICES SHALL BE INCLUDED IN THE PLANS WITH ADDITIONAL MEASURES/DEVICES NOTED.

F. SEDIMENT AND EROSION CONTROL BMP SHALL BE AVAILABLE, INSTALLED, AND/OR APPLIED PRIOR TO COMMENCEMENT OF CONSTRUCTION, INSTALLED APPROPRIATELY AS CONSTRUCTION PROGRESSES, AND MAINTAINED IN OPERABLE CONDITION UNTIL FINAL STABILIZATION OF THE SITE IS ACHIEVED. SEDIMENT AND EROSION CONTROL BMP ARE REQUIRED YEAR-ROUND.

G. WET WEATHER PREPARATION: THE CONTRACTOR, DEVELOPER, AND ENGINEER OF WORK SHALL BE RESPONSIBLE TO REVIEW THE CONDITION OF THE PROJECT SITE PRIOR TO OCTOBER 15 (RAINY SEASON) AND TO COORDINATE AN ENHANCED BMP IMPLEMENTATION PLAN FOR WET WEATHER CONDITIONS. A LOCALLY BASED STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (OCTOBER 15 THROUGH APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE AND STOCK PILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID MAINTENANCE OR REPAIR OF THE BMP THROUGHOUT THE RAINY SEASON.

H. IN THE EVENT OF A FAILURE, THE DEVELOPER AND/OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR CLEANUP AND ALL ASSOCIATED COSTS OR DAMAGE. IN THE EVENT THAT DAMAGE OCCURS WITHIN THE RIGHT OF-WAY AND THE COUNTY IS REQUIRED TO PERFORM CLEANUP, THE OWNER SHALL BE RESPONSIBLE FOR COUNTY REIMBURSEMENT OF ALL ASSOCIATED COSTS OR DAMAGE.

I. IN THE EVENT OF REPEATED FAILURE AND/OR LACK OF PERFORMANCE BY THE DEVELOPER AND/OR CONTRACTOR TO CORRECT SEDIMENT AND EROSION CONTROL RELATED PROBLEMS, THE DEPARTMENT MAY REVOKE ALL ACTIVE PERMITS. THE COUNTY MAY ISSUE A WRITTEN NOTICE OR STOP WORK ORDER IN ACCORDANCE WITH SECTION 22.52.120 OR 23.05.036 OF THE LAND USE ORDINANCE. DAILY PENALTIES MAY BE ASSESSED BY COUNTY CODE ENFORCEMENT FOR FAILURE TO COMPLY.

J. FINAL STABILIZATION OF THE SITE SHALL BE ESTABLISHED ON ALL DISTURBED SURFACES PRIOR TO FINAL ACCEPTANCE. WHERE VEGETATION IS USED FOR FINAL STABILIZATION, VEGETATION MUST BE MIXED AND APPLIED IN ACCORDANCE WITH THE BELOW TABLE AND SPECIFICATIONS. TEMPORARY EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ACHIEVED.

HYDROSEED MIX FOR STABILIZATION: CALIFORNIA BROME (BROMUS CARINATUS "CUCAMONGA") 12 LBS/AC

SMALL FESCUE (FESTUCA MICROSTACHYS) 5 LBS/AC TOMCAT CLOVER (TRIFOLIUM WILLDENOVII) 2 LBS/AC

CALIFORNIA POPPY (ESCHSCHOLZIA CALIFORNICA) 1.5 LBS/AC

SKY LUPINE (LUPINUS NANUS) 2 LBS/AC GOLDFIELDS (LASTHENIA CALIFORNICA) 0.5 LB/AC

INSTALL SEED MIX AT RATE OF 23 POUNDS PER ACRE ON ALL DISTURBED, UNCOMPACTED SOILS. INCORPORATE COMPOST, FIBER, AND TACKIFIER PER APPLICATOR SPECIFICATIONS BASED ON SITE SLOPE AND SOIL TYPE.

K. THE COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) MAY HAVE ADDITIONAL PROJECT SPECIFIC EROSION CONTROL REQUIREMENTS. THE CONTRACTOR, DEVELOPER, AND ENGINEER OF WORK SHALL BE RESPONSIBLE FOR MAINTAINING SELF-REGULATION OF THESE REQUIREMENTS.

L. IF CONSTRUCTION GENERAL PERMIT FOR STORMWATER DISCHARGE ENROLLMENT IS NECESSARY, THE DEVELOPER (OR LEGALLY RESPONSIBLE AGENT) SHALL SUBMIT THE REQUIRED PERMIT REGISTRATION DOCUMENTS TO THE STATE WATER RESOURCES CONTROL BOARD AND PROVIDE PROOF OF ENROLLMENT TO THE COUNTY PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. THE PROJECT WASTE DISCHARGE IDENTIFICATION NUMBER (WDID#) IS: ______

CONSTRUCTION NOTES

- 2. BMPS ARE SHOWN IN APPROXIMATE LOCATIONS AND

CONTRACTOR TO ADJUST LOCATIONS AS NEEDED.

TOTAL PROJECT DISTURBED AREA 0.3 ACRES

1. INSTALL GRAVEL BAGS AT CURB CUTS TO BLOCK FLOW FROM ENTERING BIORETENTION AREAS. COUNTY TO REMOVE GRAVEL BAGS AT A TIME FOLLOWING CONSTRUCTION COMPLETION.

- GRAVEL BAGS AT CURB CUT. SEE DETAIL 6, SHEET 3

INSTALL TEMPORARY SECURE CHAIN-LINK CONSTRUCTION FENCING SURROUNDING INFILTRATION GALLERY AND PREVENTING ACCESS BETWEEN SPORTS FIELD AND STREET. PROVIDE PRIVACY SCREEN ON CONSTRUCTION FENCE ALONG SPORTS FIELD. **OCEANO ELEMENTARY SCHOOL** SPORTS FIELD

- GRAVEL BAGS AT CURB CUT. SEE DETAIL 6, SHEET 3

PASO ROBLES STREET

<u>OCEANO ELEMENTARY SCHOOL - PLAN VIEW</u>

SCALE HORIZ 1"=20'

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VALVE CA	LLOUT	LATE	RAL PIPE	SIZING	G GUIDE
		UNL	ESS NOTED OT	HERWISE AS FOLLO	E, SIZE DWS:
# • \ #"• #• \	/ALVE NOMBER /ALVE FLOW (GPM) /ALVE SIZE	0 - 7 8 - 7 15 - 21 -	GPM - 4 GPM - 20 GPM - 30 GPM -		3/4" 1" 1-1/4" 1-1/2"
 REFER TO \$ REFER TO \$ IRRIGATION DIAGRAMM, AREAS. INS WALLS. NEW IRRIG/ ELEMENTAI TO BIDDING REFER TO \$ LOCATIONS VERIFY ALL TO BIDDING	SHEET LI-2.0 FOR FUL SHEET LI-3.0 AND LI-4 I MAINLINE, SPRINKLI ATICALLY. MAINLINE TALL MAINLINE WHEI ATION WILL CONNECT RY SCHOOL. VERIFY I CEANO ELEMENTAR OF WIRE PULL BOX INFORMATION REGA INFORMATION REGA INFORMATION REGA ACHITECT WITH R BUBBLER ASSEMBLY VELL WATER SOURCI JMBERS SHOWN ONL OR FINAL STATION N TION.	L IRRIGATION .0 FOR IRRIGAT ERS AND EQUIF AND VALVES S NEVER POSSIB T TO EXISTING DETAILS WITH RY SCHOOL AS- AND EXISTING AND EXISTING AND EXISTING AND EXISTING AND EXISTING AND EXISTING AND EXISTING AND DRIP LIN E. .Y FOR IDENTIF UMBERS AND F	IEGEND. FION DETAILS. PMENT ARE SHO HALL NOT BE PL LE 18" FROM WA CONTROLLER A SCHOOL REPRE BUILT DRAWING 3" MAINLINE. CO NG EQUIPMENT PRESSURE: APF ELD AND NOTIFY TO CONSTRUCT E SHALL BE PUF FICATION. COOF FOR THE RECOF	DWN LACED IN ALKS, FER AT OCEAN ESENTATI GS FOR S DNTRACT IN THE F PROX 90 F CLIENT / CLIENT / CLIENT / CLIENT / CLIENT / CLIENT / CLIENT /	PAVED NCES AND NO VES PRIOR PECIFIC OR SHALL TIELD PRIOR PSI. AND DENTIFY WITH TO FINAL
Cal 1050 Southwood San Luis Obispo P 805.544.7407	Drive , CA 93401 F 805.544.3863	OCEA INFILTRATIC DRAWN BY	ANO ELEMEN DN & FRON IRRIGATIC LI-1 OCEANC DATE 5/19/2	NTARY TAGE IN DN PL <i>4</i> . 0 D, ca	SCHOOL MPROVEN AN ca job no. 2105

IRRIGATION NOTES GENERAL NOTES:

- 1. IRRIGATION MAINLINE, WIRE, VALVES AND CONTROLLERS WHICH SERVE AREAS OUTSIDE OF THE PROJECT SITE SHALL REMAIN OPERATIONAL.
- 2. PROTECT IRRIGATION SYSTEMS TO REMAIN AND MAKE ANY ADJUSTMENTS NECESSARY AND AS DIRECTED ON PLANS FOR COMPLETE IRRIGATION COVERAGE. ANY DAMAGE TO EXISTING LANDSCAPE OR IRRIGATION CAUSED BY OPERATIONS OF CONTRACTOR SHALL BE REPAIRED TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.
- EXERCISE CARE WHEN TRENCHING AROUND EXISTING LANDSCAPE AND PROTECT EXISTING LANDSCAPE DURING ALL PHASES OF WORK. WHEN ENCOUNTERED, HAND TRENCH AROUND EXISTING PLANT/ TREE ROOTS OVER 2" IN DIAMETER. ALL DISTURBED AREAS SHALL MATCH APPEARANCE OF ADJACENT AREAS AT END OF WORK.
- 4. PRIOR TO ANY CONSTRUCTION, CONTACT AND COORDINATE WORK WITH OCEANO ELEMENTARY SCHOOL'S REPRESENTATIVE TO VERIFY THE LOCATIONS OF ALL EXISTING IRRIGATION EQUIPMENT SUCH AS MAINLINE, HEADS, VALVES, VALVE BOXES. CONTROLLERS AND REMOTE CONTROL WIRING THAT MAY FALL ADJACENT TO, AND WITHIN THE LIMIT OF NEW CONSTRUCTION.
- 5. ASCERTAIN THE EXTENT OF ANY SIMULTANEOUS AND ESSENTIAL WORK BY OTHERS ON THE SITE. CONTRACTORS SHALL COORDINATE THEIR OPERATIONS AND SHALL COOPERATE TO MINIMIZE INTERFERENCE.
- CORRELATE AND CONFIRM DIMENSIONS AT THE JOB SITE, PRIOR TO START OF ANY WORK.
- 7. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STUBBED OUT SPARE IRRIGATION WIRES AND THE COMMON WIRE AT THE CONNECTION POINT. RUN WIRE CONDUCTIVITY TEST ON WIRES TO ENSURE THEY ARE VIABLE FOR USE. COORDINATE WITH DISTRICT FOR ASSIGNMENT OF THE NEW VALVES.
- 8. COORDINATE ALL WIRE WORK WITH OCEANO ELEMENTARY SCHOOL'S REPRESENTATIVE PRIOR TO INSTALLING WIRES.
- THESE SYSTEMS ARE DESIGNED ACCORDING TO AN EXISTING STATIC WATER PRESSURE OF 90 PSI AVAILABLE AT THE EXISTING MAINLINE CONNECTION POINT. A MINIMUM OF 30 PSI IS REQUIRED AT THE SPRINKLER HEADS. ENSURE ALL LANDSCAPED AREAS AFFECTED BY THIS CONSTRUCTION RECEIVE COMPLETE IRRIGATION COVERAGE.
- 10. VERIFY THE EXACT LOCATION AND THE EXISTING AVAILABLE WATER PRESSURE AT POINT OF CONNECTION PRIOR TO ORDERING ANY IRRIGATION MATERIALS AND PROCEEDING WITH INSTALLING IRRIGATION SYSTEM. IF THE CONTRACTOR FAILS TO NOTIFY THE LANDSCAPE ARCHITECT SHOULD THE EXISTING AVAILABLE WATER PRESSURE FOUND BE DIFFERENT, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES AND ADDITIONS THAT MAY OCCUR TO THE SYSTEMS.
- 11. IRRIGATION MAINLINE, SPRINKLERS AND EQUIPMENT ARE SHOWN DIAGRAMMATICALLY. MAINLINE AND VALVES SHALL NOT BE PLACED IN PAVED AREAS.
- 12. VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES, STRUCTURES, EXISTING IRRIGATION VALVES, MAINLINE, CONTROL WIRES, LATERAL LINE AND SPRINKLER HEADS IN WORK AREA PRIOR TO START OF CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK, CONTRACTOR SHALL PROMPTLY NOTIFY LANDSCAPE ARCHITECT TO ARRANGE FOR RELOCATIONS IF REQUIRED WITHIN WORK AREA PRIOR TO START OF CONSTRUCTION.
- 13. INSTALL QUICK COUPLING VALVES AND REMOTE CONTROL VALVES IN PLANTING AREAS WHENEVER POSSIBLE.
- 14. ALL LATERAL END RUNS ARE 3/4" SIZE UNLESS INDICATED OTHERWISE.
- 15. ALL IRRIGATION LINES PASSING UNDER PAVING, THROUGH WALLS, STRUCTURES, ETC. SHALL BE SLEEVED WITH PVC SCH 40 BELL-END PIPE. SLEEVE SHALL BE 2 TIMES THE DIAMETER OF PIPE TO BE SLEEVED, MINIMUM.
- 16. CONTROL WIRES PASSING UNDER PAVING, THROUGH WALLS, STRUCTURES, ETC. SHALL BE INSTALLED IN PVC SCH 40 BELL-END PIPE SLEEVES (USE SWEEPS WHERE POSSIBLE) AT LEAST 2 TIMES THE DIAMETER OF WIRE BUNDLE (2" SIZE MINIMUM); KEEP SEPARATE FROM WATER LINE SLEEVES INDICATED ON PLANS.
- 17. NO LOW HEAD DRAINAGE IS ALLOWED. WHERE LOW HEAD DRAINAGE OCCURS, THE CONTRACTOR SHALL INSTALL AN ANTI-DRAIN VALVE UNDER EACH SPRINKLER HEAD. THE ANTI-DRAIN VALVE WILL BE THE SAME DIAMETER SIZE AS THE RISER AND SHALL BE INTEGRATED INTO THE RISER ASSEMBLY. VALVE SHALL BE "HUNTER HCV", OR APPROVED EQUAL. IN THE CASE OF HEADS WITH BUILT-IN ANTI-DRAIN VALVES, THE MANUFACTURER'S INTEGRATED CHECK VALVE SHALL BE USED.
- 18. ALL PLANTINGS SHALL BE FULLY WATERED IN UPON PLANTING. DO NOT RELY SOLELY UPON THE SPRINKLER SYSTEM. UTILIZE SUPPLEMENTAL HOSE WATERING AS REQUIRED, INITIALLY AND DURING THE PLANT ESTABLISHMENT PERIOD, TO ENSURE ALL PLANTINGS RECEIVE ADEQUATE AND REGULAR WATER TO THE ENTIRE ROOT ZONE.

REPAIR & REPLACE NOTES:

- 1. THE EXACT LOCATION OF EXISTING EQUIPMENT MAY BE DIFFERENT FROM THAT SHOWN HEREON. PRIOR TO CONSTRUCTION OR EXCAVATION FIELD VERIFY ALL EXISTING LOCATIONS OF IRRIGATION EQUIPMENT AND LINES.
- 2. INSPECT THE PROJECT SITE PRIOR TO BEGINNING WORK, AND TO THE BEST OF ABILITIES, DETERMINE WHICH EXISTING IRRIGATION FACILITIES ARE AFFECTED BY CONSTRUCTION OF SITE IMPROVEMENTS.
- 3. TAKE APPROPRIATE ACTION PRIOR TO GRADING, TO ENSURE THAT EXISTING PRESSURIZED WATER LINES, LATERAL LINES AND IRRIGATION CONTROL WIRES ARE PROPERLY DISCONNECTED, RELOCATED AND/OR CAPPED TO PREVENT WATER SPILLAGE OR POTENTIAL HAZARDS.
- 4. HAVE A QUALIFIED PERSON ON SITE TO DISCONNECT AND CAP EXISTING IRRIGATION FACILITIES.

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- 5. OBTAIN APPROVAL FROM THE DISTRICT'S REPRESENTATIVE FOR RELOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- 6. VERIFY EXACT LOCATIONS AND STAKE ALL DISCONNECTED, CAPPED OR RELOCATED FACILITIES IN THE FIELD.
- 7. AT ALL TIMES, ENSURE THAT EXISTING IRRIGATION FACILITIES STAY OPERATIONAL AND ADJOINING UNDISTURBED AREAS RECEIVE ADEQUATE AND REGULAR IRRIGATION.
- 8. HAND IRRIGATE ALL EXISTING LANDSCAPED AREAS WHICH CANNOT BE IRRIGATED BY EXISTING FACILITIES AFFECTED BY THE IMPROVEMENTS UNTIL IRRIGATION SYSTEMS ARE RESTORED.
- 9. MODIFY EXISTING IRRIGATION SYSTEMS IN AREAS INDICATED ON THE PLANS. RELOCATED EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO: SPRINKLER HEADS, DISTRIBUTION LINES, AND IRRIGATION WIRE. ANY NEW EQUIPMENT WILL MATCH THE MANUFACTURER AND MODEL NUMBER OF EQUAL, OF EXISTING EQUIPMENT.
- 10. REGULAR WATERING OF EXISTING LANDSCAPED AREAS SHALL OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. NOTIFY DISTRICT'S REPRESENTATIVE WELL IN ADVANCE AND COORDINATE WORK SUCH THAT WATER SERVICE IS ONLY DISRUPTED FOR THE BRIEF MOMENT REQUIRED TO MAKE CONNECTIONS TO EXISTING MAINLINES.
- 11. PATCH AND REPAIR ALL EXISTING PLANTING AND IRRIGATION WORK DAMAGED BY INSTALLATION OF NEW IRRIGATION WORK. ALL REPAIRED AREAS SHALL MATCH ADJACENT AREAS. REPAIRED/ REPLACED IRRIGATION MATERIALS SHALL BE OF SAME MANUFACTURER AND MODEL AS DISTURBED ORIGINAL.CONSTRUCTION MODIFICATIONS TO EXISTING SYSTEMS SHALL ACHIEVE "HEAD TO HEAD" COVERAGE.
- 12. CHALK THE CONFIGURATION OF THE MODIFIED SYSTEM IN THE FIELD AND OBTAIN APPROVAL FROM THE DESIGNATED DISTRICT'S REPRESENTATIVE PRIOR TO TRENCHING.
- 13. AFTER EXISTING IRRIGATION SYSTEM MODIFICATIONS ARE COMPLETE, CONTRACTOR SHALL CONDUCT A COVERAGE TEST IN THE PRESENCE OF THE DISTRICT'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT FOR FINAL APPROVAL.

Project N	lo.: 2022-046						Date:	May 16, 2	2023
					City/	Governiı	ng Agency:	County of San L	uis Obispo
					Lands	cape Pr	oject Type:	Non-reside	ential
Project Na	me:	19th Street Ocea	no-Phase 1 -	Controller A					
Reference	Evapotranspira	tion (ETo):	40.57	in/yr	CIMIS St	ation #		202	
LA (Landso	cape Area):		409	sq ft	Planni	ng Area		Nipomo	
SLA (Speci	ial Landscape /	Area):		sq ft					sq ft:
Water Sou	rce:	Non-potable Wat	er		SLA Desc	ription:		Crop plants	
								RW irrigation	
MAWA = M	laximum Applie	d Water Allowan	ice (gal/yr)					RW feature/s	
MAWA	= (ETo) (0.62) [(0.45 x LA) + (0.5	5 x SLA)]					Active turf	
ETo	= Reference eva	apotranspiration (i	in inches per y	ear)				Total:	
0.62	= Conversion fa	ctor (to get gallon	s per sq ft)					-	
0.45	= ET Adjustmer	nt Factor (ETAF) (1	for plant factor	s and irrigation	n efficiency)				
LA	= Landscape Ar	ea including any	SLA (in sq ft)						
0.55	= Additional Wa	ter Allowance for	any SLA						
01.4	- On a stall and	anna Araa (in an	ft) (adibla aron		tor footuroo .	م م رما م م		tion of the other of the set	raaa)
SLA	= Special Lands	scape Area (in sq	it) (euible ciop	is, recycleu wa	iller lealures, r	ecyclea i	water, recrea	tional/active turr a	reas)
SLA Calculation:	= Special Lands	scape Area (in sq		is, recycled wa	iter reatures, r	ecycled	water, recrea	tional/active turna	ieas)
SLA Calculation: (40.569999	= Special Lands <u>:</u> 99999999) x (0.6	2) x [(0.45 x 409)	+ (0.55 x 0)]	is, recycled wa	iter leatures, r	ecycled (MAWA =	4,631	gal/yea
SLA <u>Calculation</u> (40.569999	= Special Lands <u></u>	2) x [(0.45 x 409)	+ (0.55 x 0)]		iter reatures, r		MAWA =	4,631	gal/yea
SLA <u>Calculation</u> (40.569999 ETWU = Es	= Special Lands <u> 99999999) x (0.6</u> 	2) x [(0.45 x 409)	+ (0.55 x 0)]				MAWA =	4,631	gal/yea
SLA <u>Calculation</u> (40.569999 <u>ETWU = Es</u> FTWU =	= Special Lands 9999999) x (0.6 stimated Total V (ETO) (0.62) [(E	2) x [(0.45 x 409) <u>Vater use (gal/yr</u> PE x HA ÷ IE) + SI	+ (0.55 x 0)]				MAWA =	4,631	gal/yea
SLA <u>Calculation</u> : (40.569999 <u>ETWU = Es</u> ETWU =	= Special Lands 99999999) x (0.6 stimated Total V (ETO) (0.62) [(F	2) x [(0.45 x 409) <u>Vater use (gal/yr</u>) PF x HA ÷ IE) + SI	+ (0.55 x 0)]) LA]				MAWA =	4,631	gal/yea
SLA <u>Calculation</u> : (40.569999 <u>ETWU = Es</u> ETWU = ETO 2.00	= Special Lands 99999999) x (0.6 stimated Total V (ETo) (0.62) [(F = Reference eva	2) x [(0.45 x 409) <u>Vater use (gal/yr</u>) F x HA ÷ IE) + SI apotranspiration (i	+ (0.55 x 0)] 	ear)			MAWA =	4,631	gal/yea
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SLA <u>Calculation</u> : (40.5699999 ETWU = Es ETWU = ETO 0.62 PF HA IE SLA <u>Calculation</u> : (40.569999 Hydrozone No. 1	 Special Lands 99999999) x (0.6) stimated Total V (ETo) (0.62) [(F Reference eva Conversion fa Plant Factor fi (low: 0.1-0.3, Hydrozone Ar Irrigation Efficient Special Lands 99999999) x (0.6) Plant Water Use Type Classification 	2) x [(0.45 x 409) Vater use (gal/yr PF x HA + IE) + SI apotranspiration (i ctor (to get gallon rom Water Use CI moderate: 0.4-0.6 ea (low, moderate iency (Bubbler: 0. scape Area (in sq 2) x [(152) + 0] Plant Trees	+ (0.55 x 0)] (LA] in inches per y is per sq ft) assification of i, high: 0.7-1.0 e, or high wate 81; Spray: 0.7 ft) (edible crop	ear) Landscape Sp ; artificial turf: er use in sq ft) 5; Microspray: is, recycled wa Hydrozone Area (HA) (sq ft)	Decies (WUCC 0.1-0.2; water 0.75; Rotator tter features, r PF x HA (sq ft)	ULS) features : 0.75; Re ecycled v	: 0.8) otor: 0.75; Dr water, recrea ETWU = PF x HA / IE 93	tional/active turf a 4,631 tional/active turf a 3,824 Irrigation Method	gal/yea
SLA <u>Calculation</u> : (40.5699999 ETWU = Es ETWU = ETO 0.62 PF HA IE SLA <u>Calculation</u> : (40.5699999 Hydrozone No. 1 2	 Special Lands 99999999) x (0.6. stimated Total V (ETo) (0.62) [(F Reference eva Conversion fa Plant Factor fa (low: 0.1-0.3, Hydrozone Ar Irrigation Effic Special Lands 99999999) x (0.6. Plant Water Use Type Classification Low 	2) x [(0.45 x 409) Vater use (gal/yr) PF x HA ÷ IE) + SI apotranspiration (i ctor (to get gallon rom Water Use Cl moderate: 0.4-0.6 ea (low, moderate iency (Bubbler: 0. scape Area (in sq 2) x [(152) + 0] Plant Trees Strutes/GC	+ (0.55 x 0)] + (0.55 x 0)] LA] in inches per y is per sq ft) assification of b, high: 0.7-1.0 e, or high wate 81; Spray: 0.7 ft) (edible crop Plant Factor (PF) 0.3 0.3	ear) Landscape Sp ; artificial turf: er use in sq ft) 5; Microspray: ss, recycled wa Hydrozone Area (HA) (sq ft) 250	Pecies (WUCC 0.1-0.2; water 0.75; Rotator tter features, r PF x HA (sq ft) 75 48	ELS) features : 0.75; Ri ecycled v [[0.81 0.81	: 0.8) otor: 0.75; Dr water, recrea ETWU = PF x HA / IE 93 50	ip:0.81) tional/active turf a 3,824 Irrigation Method Bubbler	gal/yea

Note: MAWA formula and Irrigation Efficiency factors per latest State MWELO revisions

Estimated Total Water Use is under the Maximum Applied Water Allowance.

IDDICATION CALCULATIONS

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	Cł E

ETWU =

MAWA =

3,824 gal/year

4,631 gal/year

IRRIGATI	ON LEGEND			
SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	REMARKS	DETAIL
	TREE BUBBLER ASSEMBLY	RAINBIRD RWS-M-B-C 1402, 18" MINI SLEEVE & LOCKING PURPLE GRATE (RWS-GRATE-P), SPRING CHECK VALVE, 1402 BUBBLER, SWING JOINT ASSEMBLY. PROVIDE AND CUT RWS SOCK TO COVER SLEEVE.	PROVIDE TWO PER TREE	F / LI-3.0
•	ELECTRIC REMOTE CONTROL VALVE	HUNTER IBV-FS (1")	APPROXIMATE LOCATION SHOWN, FIELD VERIFY	D / LI-3.0
	PRESSURE REGULATING SCREEN FILTER	HUNTER #HFR-100-075-40	APPROXIMATE LOCATION SHOWN, FIELD VERIFY	D / LI-3.0
	SUBSURFACE DRIP LINE, PURPLE STRIPE	NETAFIM TLHCVXR-RE-R7-12XX	0.7 GPH/ 12" EMITTER SPACING. DRIP LATERALS SPACED 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, WITH NETAFIM FITTINGS.	B,C / LI-4.0
¢	MANUAL FLUSH VALVE	PVC BALL VALVE FLUSH ASSEMBLY IN 10" ROUND GREEN CARSON BOX	PROVIDE AT EACH DRIP ZONE.	D / LI-4.0
Ą	AIR VACUUM RELIEF VALVE	HUNTER AVR-075, AIR VACUUM RELIEF VALVE	PROVIDE AT EACH DRIP ZONE AT HIGHEST ELEVATION POINT IN DRIP ZONE	E / LI-4.0
Φ	DRIP OPERATION INDICATOR	HUNTER ECO-ID-12-R	PROVIDE AT EACH DRIP ZONE.	F / LI-4.0
	DRIP TO PVC LINE TRANSITION FITTINGS	PVC SCH 40 ELL, LINE SIZE SLIP X $\frac{1}{2}$ " FIPT AND $\frac{1}{2}$ " BARBED MALE ADAPTER	INSTALL PER IRRIGATION DETAILS	B,C / LI-4.0
۲	QUICK-COUPLING VALVE	RAIN BIRD 33-DNP 3/4" BRASS QUICK- COUPLING VALVE, WITH CORROSION- RESISTANT STAINLESS STEEL SPRING, PURPLE LOCKING THERMOPLASTIC RUBBER COVER, DOUBLE TRACK KEY LUG, AND 2-PIECE BODY.	APPROXIMATE LOCATION SHOWN, FIELD VERIFY	E / LI-3.0
×	BRASS SHUTOFF VALVE	NIBCO T580-70-66	APPROXIMATE LOCATION SHOWN, FIELD VERIFY	A / LI-3.0
	LATERAL LINE: PVC SCHEDULE 40, PURPLE	PVC SCHEDULE 40 WITH SCHEDULE 40 FITTINGS	1" SIZE & ABOVE ARE INDICATED ON THE PLANS. LINE ENDS ARE ³ / ₄ " SIZE UNLESS OTHERWISE INDICATED.	B,C / LI-3.0
	MAINLINE	PVC CLASS 315 FOR 2" SIZE, PVC SCHEDULE 40 FOR 1-1/2" SIZE AND SMALLER SIZES (SIZE PER PLAN), PURPLE	APPROXIMATE LOCATION SHOWN, FIELD VERIFY	B,C / LI-3.0
	PIPE SLEEVE	PVC SCHEDULE 40, PURPLE	MIN. 2" SIZE. MIN. 2X DIAMETER OF THE PIPE SLEEVED	B,C / LI-3.0

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CAP. REFER TO LEGEND. (3) FINISH GRADE OF MULCH

SCALE: N.T.S.

- (5) THREADED BRASS PIPE RISER. LENGTH AS REQUIRED. WRAP WITH PVC TAPE (6) FILTER FABRIC (MIRAFI #140N, OR
- APPROVED EQUAL). WRAP 1 LAYER AROUND BOX, COVERING HOLES

5 SAND BACKFILL MATERIAL. FREE FROM ALL ROCK

(6) #12 TRACER WIRE, TAPED TO TOP OF MAINLINE

(7) PURPLE PRESSURE SUPPLY LINE. SEE LEGEND

(8) CONTROL WIRES IN CONDUIT, 2" AWAY FROM AND

(1) VALVE BOX WITH LID, SEE

(4) BACKFILL MATERIAL

SPECIFICATIONS (DO NOT CUT

ADDITIONAL HOLES IN BOX)

(2) QUICK COUPLING VALVE, PURPLE

FOR CLASS, REFER TO PLAN FOR SIZE

BESIDE PRESSURE SUPPLY LINE.

LEGEND

EVERY 10 FEET

AND DEBRIS GREATER THAN ONE HALF INCH. 6"

ABOVE AND 6" BELOW PRESSURE SUPPLY LINE

- (7)GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE
- (8) BRASS 90 DEGREE ELL, WRAP WITH PVC TAPE.
- (9) CONCRETE THRUST BLOCK. 1 CU.FT MINIMUM
- (10) BRASS COUPLING WITH PVC SCH 80 MALE ADAPTER. SLIP X MIPT. ON PURPLE PVC PRESSURE SUPPLY LINE.
- (11)THREADED BRASS NIPPLE. LENGTH AS REQUIRED, WRAP WITH PVC TAPE

LEGEND

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- (1) FINISH GRADE
- (2) BACKFILL MATERIAL. FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE INCH
- (3) PURPLE NON-PRESSURE LATERAL LINE FOR RISERS OUTLET PVC PIPE, AND POP-UPS 6" OR LESS. SEE LEGEND FOR CLASS, REFER TO PLAN FOR SIZE
- (4) 3" DETECTABLE MARKING TAPE (PURPLE)

TRENCH IN LANDSCAPE SECTION

NOTES:

- A. USE TEFLON TAPE ON ALL THREADED
- CONNECTIONS B. PROVIDE TWO (2) WRAPS (WITH 1/4" OVERLAP) BLACK PVC ADHESIVE TO ALL BRASS EXPOSED TO CEMENT.

QUICK COUPLING VALVE SECTION

TRENCH IN HARDSCAPE SECTION

NOTE:

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1. POSITION UNITS SPACED EVENLY AROUND PLANTING PIT. NOT TO EXCEED 12" FROM EDGE OF ROOTBALL

TREE BUBBLER ASSEMBLY

SECTION

LEGEND

- (1) HARDSCAPE MATERIAL
- (2) BASE MATERIAL
- (3) BACKFILL MATERIAL. FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE INCH SIZE.
- (4)) NON-PRESSURE LATERAL LINE (PURPLE) IN PVC SCH 40 SLEEVE (PURPLE) MINIMUM. TWICE THE DIAMETER OF THE LINE RUNNING THROUGH. ALL LATERAL LINES SHALL BE AT THE SAME DEPTH UNDER HARDSCAPE
- (5) 3" DETECTABLE MARKING TAPE (PURPLE).
- (6) BACKFILL SAND FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE-HALF INCH SIZE. 6" ABOVE AND **6" BELOW PRESSURE SUPPLY LINE**
- (7) #12 TRACER WIRE, TAPED TO TOP OF MAINLINE EVERY 10 FEET
- (8) PRESSURE SUPPLY LINE (PURPLE) IN PVC SCH 40 SLEEVE (PURPLE) TWICE THE DIAMETER OF THE LINE RUNNING THROUGH
- SCH 40 PVC ELECTRICAL CONDUIT (9)FOR ALL IRRIGATION WIRES. SEE LEGEND FOR CLASS, REFER TO SPECIFICATIONS FOR SIZES

SCALE: N.T.S.

LEGEND

- (1) TREE PER PLANTING DETAILS
- (2) MULCH MATERIAL PER PLANTING PLANS
- (3) TREE ROOTBALL AND PLANTING BACKFILL
- (4) TOP OF PURPLE GRATE FLUSH WITH FINISH GRADE
- (5) PRE-ASSEMBLED DEEP WATERING TUBE. REFER TO LEGEND FOR MODEL NUMBER
- (6) FILTER FABRIC SLEEVE FILLED WITH SANDY BACKFILL SOIL
- (7) EXISTING SUB-GRADE
- (8) PURPLE PVC LATERAL LINE. SEE PLANS FOR SIZE AND CLASS

OCEANO ELEMENTARY SCHOOL INFILTRATION & FRONTAGE IMPROVEMENTS

> IRRIGATON DETAILS LI-3.0

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drawn by DJ	DATE 5/19/2023	ca job no. 210534							
CHECKED BY	SCALE	SHEET 16 of 29							

SCALE: N.T.S.

NOTE:

1. THE 3M SCOTCHCAST CONNECTOR SEALING PACK 3570G-N SHOULD REMAIN SEALED IN THE GUARD BAG (WHILE ALUMINIZED BAG) UNTIL READY TO USE. IN COLD WEATHER WARM CLOSED MIXING POUCH TO 50°F OR WARMER PRIOR TO MIXING. KEEP IN WARM AREA, SUCH AS TRUCK CAB OR INSIDE POCKET, UNTIL READY TO USE. PER MANUFACTURER'S INSTRUCTIONS.

WATERPROOF WIRE CONNECTOR Α ISOMETRIC

INSTALLATION STEPS

- (1) THOROUGHLY CLEAN AND DRY THE SURFACE OF THE SUBSTRATE TO WHICH THE MATERIAL IS DESIRED TO BOND.
- (2) REMOVE GUARD BAG, USING CAUTION NOT TO DAMAGE INNER BAG.
- (3) GRIP BOTH EDGES OF BAG AT THE CENTER BARRIER (FIGURE 1) AND WRINKLE AND FLEX THE BAG ACROSS THE BARRIER. THIS WILL WEAKEN THE BARRIER.
- (4) SQUEEZE THE CLEAR SIDE OF THE **RESIN, FORCING THE RESIN THROUGH** THE CENTER BARRIER.
- (5) MIX THOROUGHLY TO A UNIFORM COLOR BY SQUEEZING CONTENTS BACK AND FORTH 25-30 TIMES.
- (6) SQUEEZE RESIN TO ONE END OF BAG AND CUT OFF OTHER END. (FIGURE 2)
- (7) SLOWLY INSERT CONNECTION INTO SEALING PACK UNTIL IT FITS SNUGLY AGAINST THE OPPOSITE END. (FIGURE 3)
- (8) WRAP OPEN END OF BAG WITH SCOTCH SUPER 33+ VINYL ELECTRICAL TAPE AND POSITION THE TAPED END UP UNTIL RESIN GELS (8-12 MIN. @ 73°F). (FIGURE 4)

LEGEND

- (1) 18" MINIMUM LENGTH OF $\frac{1}{2}$ " SILICONE HOSE
- (2) VALVE BOX, (DO NOT CUT ADDITIONAL HOLES IN BOX)
- (3) FINISH GRADE OF MULCH
- (4) BACKFILL MATERIAL
- 5 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES
- (6) PVC SCH 40, $\frac{3}{4}$ " MIPT X $\frac{1}{2}$ " BARB HOSE ADAPTER
- (7) PVC SCH 40, $\frac{3}{4}$ " FIPT X FIPT BALL VALVE
- (8) PVC SCH 40, $\frac{3}{4}$ " THREADED NIPPLE
- (9) PVC SCH 40, 45 DEGREE ELL
- (10) TERMINAL END OF PURPLE
- NON-PRESSURE LATERAL LINE, $\frac{3}{4}$ " SIZE, (USE BARBED FITTINGS IF THIS OPTION)
- (11) GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE

NOTE:

1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

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NOTES:

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- 1. THIS DETAIL IS INTENDED TO INDICATE GENERAL COMPONENTS AND LAYOUT. DRIPLINES ARE TO OCCUR ON EACH SIDE OF SUPPLY LINE MANIFOLD AS IF MIRRORED
- 2. DRIP SYSTEM SHOWN ON PLAN CANNOT INDICATE ALL FORESEEN OR UNFORESEEN OBSTACLES (BOULDERS, FIXTURES, ETC.). PROVIDE NECESSARY FITTINGS, TUBING AND PIPING AS REQUIRED TO PROVIDE COMPLETE WATER COVERAGE FOR LANDSCAPE PLANTINGS.
- 3. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

LEGEND:

- (1) DRIP END FLUSH VALVE
- (2) PERIMETER TUBING 3" FROM EDGE OF HARDSCAPE. CENTER TUBING IN LONG LINEAR PLANTING AREAS
- (3) AIR VACUUM RELIEF VALVE (PLUMBED TO PURPLE PVC PIPE AT HIGHEST **ELEVATION IN SYSTEM)**
- (4) REMOTE CONTROL VALVE W/BALL VALVE, DRIP FILTER & PRESET PRESSURE REGULATOR
- (5) PURPLE PVC SCH 40 NON-PRESSURE SUPPLY LINE MANIFOLD
- (6) 18" SPACING
- (7) DRIPLINE (STRICTLY PARALLEL AT ALL TIMES, WITH DRIP OUTLETS TRIANGULATED)
- (8) BARBED TEE/ ELL (AS REQUIRED)
- (9) AREA PERIMETER

LEGEND:

- FIPT

NOTE:

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DRIPLINE TUBING SPACING & LAYOUT SCALE: NTS PLAN

LEGEND

- (1) AIR VACUUM RELIEF VENT
- (2) VALVE BOX W/LOCKING LID (SEE SPECIFICATIONS)
- (3) FLUSH WITH FINISH GRADE OF MULCH
- (4) SEE TRENCHING DETAILS FOR DEPTH
- (5) PVC SCH 80 THD'D RISER W/ ADAPTER (LENGTH AS REQUIRED)
- (6) PLASTIC STRAP/TIE
- (7) #3 REBAR 12" MIN. LONG
- (8) PVC SCH 40 ELL (SS)
- (9) FILTER FABRIC (MIRAFI #140N) WRAP 1 LAYER AROUND BOX, COVERING HOLES
- (10) PEA GRAVEL SUMP (MIN. 1 CU FT)
- (11) UNDISTURBED/ COMPACTED SUBGRADE
- (12) PURPLE PVC SCH 40 LATERAL LINE OR DRIPLINE (USE BARBED FITTINGS IF THIS OPTION)

NOTES:

- 1. INSTALL VALVE AT HIGHEST POINT OF SYSTEM.
- 2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

DRIP AIR / VACUUM RELIEF VALVE SECTION

SCALE: NTS

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	С

- (11)^E

(1) PLANT MATERIAL PER PLANTING PLAN

(2) FINISH GRADE

- (3) EMITTER DRIPPERLINE. SEE LEGEND
- (4) AMENDED BACKFILL

5 PVC COATED TUBING STAPLE. SALCO DTS-140-900, 9" LONG, OR EQUAL, 1 PER EVERY 3 FT DRIPLINE, AT EACH CHANGE IN DIRECTION AND PUSHED INTO ROOT BALL

(6) EXISTING SUBGRADE

- (7) PVC SCH 40 ELL, LINE SIZE SLIP X 1/2"
- (8) 1/2" BARBED MALE ADAPTER
- (9) RISER FROM LATERAL DEPTH. LENGTH AS REQUIRED
- (10) PURPLE LATERAL LINE. REFER TO PLAN FOR SIZE
- (11) PURPLE EXHAUST HEADER WITH LINE SIZE SLIP TEE
- 1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

SUBSURFACE DRIPPERLINE SECTION

NOTES:

- INSTALL INDICATOR HEAD A MIN. 30" FROM THE EDGE OF PAVING OR THE PLANTER EDGE.
- 2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

DRIP OPERATION INDICATOR SECTION

SPACING AND DEPTH

SCALE: NTS

- (1) PAVEMENT OR EDGE OF PLANTED AREA
- (2) POP-UP INDICATOR CAP ON POP-UP RISER
- (3) INSTALL POP-UP INDICATOR HEAD 1/2" ABOVE FINISHED GRADE IN SHRUB AND **GROUND COVER AREAS**
- (4) AMENDED SOIL
- (5) HUNTER ECO-ID, 6" POP-UP HEAD
- (6) PRE-ASSEMBLED POLY, TRIPLE SWING JOINT, 1/2" LAY LENGTH, HUNTER, MODEL #SJ512, OR APPROVED EQUAL
- (7) DRIP SYSTEM EXHAUST HEADER, PURPLE PVC LATERAL LINE PIPE, TYPE AND SIZE AS SHOWN ON LEGEND
- (8) SCH 40 PVC SxSxT TEE FITTING, LATERAL X LATERAL X 1/2" SIZE WITH FIPT THREADS (TWO TOTAL AT LOCATION)
- (9) DRIP LATERAL CONNECTION, PURPLE PVC SCH 40 PIPE AND PVC SCH 40 TEE (SxSxS) OR ELL (SxS) FITTING
- (10) PURPLE SUBSURFACE DRIP TUBING, DEPTH AS SHOWN ON LEGEND AND DETAIL
- (11) PURPLE EXHAUST HEADER SHALL BE INSTALLED 10" MIN. BELOW FINSHED SOIL GRADE, TYPICAL

SCALE: NTS

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REV. NO	DATE	REVISED DESTROY ALL PRIN- BEARING EARLIER DA	TE BY	/. CKD. BY	APRD BY				SCHOOL
<u>/1</u>	07/10/23	ISSUED FOR BID	D	I DJ	CL			& FRUNTAGE I	MPROVEMENTS
						Cannon	P	LANTING PLA	AN
				_		1050 Southwood Drive		UCLANO, CA	
						San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	drawn by DJ	DATE 5/19/2023	ca job no. 210534
						THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE OF THE SPECIFIED PROJECT AND SHALL NOT BE USED OTHERWISE OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CANNON.	CHECKED BY	SCALE	SHEET 18 of 29

PLANT SCHEDULE (PARTIAL)											
TREES	TREES CODE BOTANICAL / COMMON NAME										
0	CER OCC	CERCIS OCCIDENTALIS STD / WESTERN REDBUD	10								
SHRUBS	CODE	BOTANICAL / COMMON NAME	QTY								
	ACH APP	ACHILLEA MILLEFOLIUM 'APPLE BLOSSOM' / APPLE BLOSSOM COMMON YARROW	9								
	ACH SCS	ACHILLEA MILLEFOLIUM 'SONOMA COAST' SONOMA COAST COMMON YARROW	10								
	ESC CAL	ESCHSCHOLZIA CALIFORNICA 'ORANGE KING' / ORANGE KING CALIFORNIA POPPY	32								
\otimes	FES IDA	FESTUCA IDAHOENSIS / IDAHO FESCUE	34								
\bigcirc	LUP ALB	LUPINUS ALBRIFRONS VAR. COLLINUS / DWARF SILVER BUSH LUPINE	35								
SHEET N	OTES										

REFER TO SHEET LP-2.0 FOR FULL PLANT AND SOIL LEGENDS. 2. APPLY PEA GRAVEL MULCH IN ALL PLANTER AREAS.

KEY NOTES

	REFER TO ENLARGEMENT 'A' THIS SHEET FOR SHRUBS AND GROUNDCOVER IN THIS LOCATION.
2	INTERPRETIVE SIGN: REFER TO DETAIL A,B / SHEET LP-4.0
3	CONSTRUCTION SIGN: REFER TO DETAIL C,D / SHEET LP-4.0
4	ROOT BARRIER, REFER TO DETAIL B, SHEET LP-3.0

PLANTING NOTES:

- 1. ALL FINISH GRADING AND LANDSCAPE OPERATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS, DETAILS, AND PROJECT SPECIFICATIONS. REFER TO PROJECT SPECIFICATIONS FOR ALL PLANTING REQUIREMENTS.
- 2. SEE SHEET LP-3.0 FOR PLANTING DETAILS. SEE LANDSCAPE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY CHANGED CONDITIONS WHICH OCCUR ON PROJECT SITE WHICH ARE NOT REFLECTED ON PLANS.
- 4. REMOVE ALL WEEDS, DEBRIS, AND ROCKS LARGER THAN ONE-HALF-INCH (1/2") FROM ALL PLANTING AREAS, AND DISPOSE OF APPROPRIATELY OFF-SITE.
- 5. FINISH GRADE OF SOIL SHALL BE TWO INCHES (2") BELOW ADJACENT FINISH PAVING SURFACE OR CURB IN SHRUB AND GROUNDCOVER AREAS EXCEPT IN RECESSED BIORETENTION AREAS.
- 6. CONTRACTOR SHALL INSTALL A THREE INCH (3") LAYER OF ROCK/COBBLE MULCH IN ALL SHRUB AND GROUNDCOVER AREAS WITH SLOPES LESS THAN 3:1 GRADIENT. SUBMIT SAMPLE FOR APPROVAL BY RESIDENT ENGINEER AND LANDSCAPE ARCHITECT. REFER TO SPECIFICATIONS.
- 7. ALL SLOPES 2:1 OR GREATER ARE TO BE STABILIZED WITH JUTE MESH PRIOR TO PLANTING. DO NOT INSTALL JUTE MESH ON SEEDED SLOPES. REFER TO SPECIFICATIONS.
- 8. CONTRACTOR SHALL PROVIDE ELECTRONIC PHOTOGRAPHS OF ALL TREES FOR APPROVAL, PRIOR TO PURCHASE AND INSTALLATION. REFER TO SPECIFICATIONS.
- 9. TREE LOCATIONS MAY BE ADJUSTED TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES. CONSULT WITH LANDSCAPE ARCHITECT OR RESIDENT ENGINEER PRIOR TO ADJUSTMENT OF TREE LOCATIONS.
- 10. CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AT THE TIME OF DELIVERY OF ANY PLANT MATERIAL WHICH HAS BEEN DAMAGED OR IS IN POOR CONDITION. THE RESIDENT ENGINEER SHALL DETERMINE ACCEPTABILITY OF SUBJECT PLANT MATERIAL.
- 11. PLANT MATERIAL SHALL BE INSPECTED BY THE RESIDENT ENGINEER OR LANDSCAPE ARCHITECT BEFORE PLANTING. PLANT MATERIAL MAY BE REJECTED AT ANY TIME BY THE RESIDENT ENGINEER OR LANDSCAPE ARCHITECT DUE TO POOR CONDITION. FORM. OR DAMAGE PRIOR TO. DURING. OR AFTER THE PLANTING PROCESS.
- 12. AT LEAST ONE PLANT OF EACH SPECIES DELIVERED TO THE SITE SHALL HAVE AN IDENTIFICATION TAG FROM THE SUPPLYING NURSERY SHOWING BOTH COMMON AND SCIENTIFIC NAMES.
- 13. THE PLANTING PLANS ARE DIAGRAMMATIC. PLANT MATERIALS SHALL BE SPOTTED AS SHOWN ON THE DRAWINGS. TREE LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE EXCAVATION OF PLANTING PITS AND REMOVAL FROM CONTAINERS. FINAL LAYOUT OF ALL OTHER PLANT MATERIALS SHALL BE APPROVED IN THE FIELD BY THE RESIDENT ENGINEER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND SQUARE FOOTAGES.
- 15. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANT MATERIALS SUFFICIENT TO COVER AREAS SHOWN ON THE DRAWINGS AT THE SPECIFIED SPACING.
- 16. NURSERY STAKES ARE TO BE REMOVED AFTER PLANTING TREES AND INSTALLATION OF STAKING OR GUYING, AS SHOWN ON PLANS.
- 17. CONTRACTOR SHALL SUBMIT AN AGRICULTURAL SUITABILITY AND FERTILITY ANALYSIS REPORT, AS NOTED IN THE PLANTING SPECIFICATIONS, TO THE LANDSCAPE ARCHITECT AND THE RESIDENT ENGINEER FOR APPROVAL PRIOR TO ANY PLANTING WORK OR SOIL AMENDMENT INCORPORATION. THE RECOMMENDATIONS OF THE SOILS ANALYSIS REPORT FOR TOPSOIL AMENDMENT AND BACKFILL MIX AMENDMENT SHALL SUPERSEDE THE RECOMMENDATIONS LISTED IN THE SPECIFICATIONS.
- 18. CONTRACTOR SHALL COORDINATE LANDSCAPE WORK WITH THE WORK OF OTHER TRADES AND PROFESSIONS. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING THE COURSE OF CONSTRUCTION.
- 19. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF EXISTING PROPOSED UTILITIES WITHIN THE PROJECT LIMITS WHICH MAY BE AFFECTED BY INSTALLATION. IMMEDIATELY CONTACT THE LANDSCAPE ARCHITECT IF A CONFLICT IS EVIDENT.
- 20. REMOVE ALL TYING MATERIALS, MARKING TAPES, AND NURSERY STAKES AT THE TIME OF PLANTING.
- 21. CONTRACTOR SHALL PROTECT EXISTING VEGETATION AND OTHER IMPROVEMENTS OUTSIDE THE LIMITS OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY DAMAGES INCURRED DURING CONSTRUCTION.

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- THE RESIDENT ENGINEER.

- AREA DRAINS.
- INSTALLATION.

MINIMUM TREE SEPARATION DISTANCE

IMPROVEMENT MINIMUM DISTANCE TO STREET TREE

TRAFFIC SIGNAL, STOP

UNDERGROUND UTILITY

SEWER LINES

ABOVE GROUND UTILITY (TRANSFORMERS, HYDR

DRIVEWAYS 10 FEET

RESIDENTIAL STREETS

INTERSECTIONS (INTERS

22. THE MAINTENANCE PERIOD SHALL BEGIN ONLY UPON WRITTEN ACCEPTANCE OF THE COMPLETED PLANTED AREAS BY THE LANDSCAPE ARCHITECT AND

23. PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIAL WITHIN EACH SPECIES AND SIZE DESIGNATED BY THE DRAWINGS.

24. ALIGN AND EQUALLY SPACE. IN ALL DIRECTIONS. ALL PLANT MATERIAL WITHIN EACH SPECIES SO DESIGNATED PER THESE NOTES AND DRAWINGS.

25. FURNISH ALL DELIVERY SLIPS OF THE SPECIFIED AMENDMENTS TO THE CONSTRUCTION MANAGEMENT SUPERVISOR AND LANDSCAPE ARCHITECT FOR REVIEW AFTER PLANT INSTALLATION. IF IT IS DETERMINED MORE AMOUNTS ARE NEEDED, CONTRACTOR WILL BE REQUIRED TO ADD INTO SOIL WITH OBSERVATION OR PROVIDE CREDIT BACK TO OWNER.

26. ALL PLANTING AREAS SHALL BE GRADED TO HAVE POSITIVE DRAINAGE (2% MIN.) AWAY FROM THE BUILDING WALLS AND STRUCTURES AND TOWARDS

27. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING LANDSCAPE WITHIN SCOPE AREA. ALL PLANTING WITHIN SCOPE OF WORK AREAS ARE TO BE KEPT FREE OF LITTER AND DEBRIS. ALL PLANTS SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION. ALL DISEASED OR DEAD PLANTS SHALL BE REPLACED IMMEDIATELY. REPLACE PLANTINGS IF DAMAGED, WITH LIKE SIZE, DURING CONSTRUCTION.

28. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REPLACEMENT OF ALL PLANTINGS DAMAGED DURING IRRIGATION REPAIR OR PLANTING

SIGN	20 FEET
LINES	5 FEET
	10 FEET
Y STRUCTURES RANTS, UTILITY POLES, ETC)	10 FEET
RATED AT 25 MPH OR LOWER	5 FEET
SECTING CURB LINES OF TWO STREETS)	25 FEET

PLANT SCHEDULE													
TREES	CODE	BOTANICAL / COMMON NAME	SIZE	WUCOLS	MIN HEIGHT	MIN WIDTH	QTY	REMARKS	DETAIL				
\bigcirc	CER OCC	CERCIS OCCIDENTALIS STD WESTERN REDBUD	36" BOX	VERY LOW	11'-13'	5'-6'	10	MINIMUM BARE TRUNK HEIGHT 8FT PER COUNTY OF SAN LUIS OBISPO STANDARD DETAIL M-5.	A, B,D / LP-3.0				
SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	WUCOLS	MIN HEIGHT	MIN WIDTH	QTY	REMARKS	DETAIL				
	ACH APP	ACHILLEA MILLEFOLIUM 'APPLE BLOSSOM' APPLE BLOSSOM COMMON YARROW	1 GAL	LOW	0'-6"	0'-6"	9	GREEN AND BUSHY					
Land Contraction of the second s	ACH SCS	ACHILLEA MILLEFOLIUM 'SONOMA COAST' SONOMA COAST COMMON YARROW	1 GAL	LOW	0'-6"	0'-6"	10	GREEN AND BUSHY					
	ESC CAL	ESCHSCHOLZIA CALIFORNICA 'ORANGE KING' ORANGE KING CALIFORNIA POPPY	4"POT	VERY LOW	0'-4"	0'-2"	32	FULL AND BUSHY, GOOD COLOR	C / LP-3.0				
\otimes	FES IDA FESTUCA IDAHOENSIS IDAHO FESCUE		4"POT	VERY LOW	0'-4"	0'-2"	34	FULL CLUMPS, GOOD COLOR					
{• }	LUP ALB	LUPINUS ALBIFRONS VAR. COLLINUS DWARF SILVER BUSH LUPINE	4" POT	VERY LOW	0'-4"	0'-2"	35	FULL AND BUSHY, GOOD COLOR					

GRASS SEED LEGEND													
KEY	KEY SYMBOL SPECIES		APPLICATION	NOTES AND REMARKS	SUPPLIER INFORMATION	DETAIL							
S-01		WHITTET-KIKUYU GRASS -95% MINIMUM PURITY -80% MINIMUM GERMINATION	BROADCAST SEED AT A RATE OF 2 LBS PER 1000 SQUARE FEET WITHIN ENTIRE DISTURBANCE AREA OF EXISTING SPORTS LAWN.	REFER TO SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.	STOVER SEED COMPANY 9180 SAN FERNANDO ROAD, SUN VALLEY, CA 91352	-							

SHEN														
KEY	SYMBOL	DESCRIPTION	COLOR AND FINISH	NOTES AND REMARKS	SUPPLIER INFORMATION	DETAIL								
M-01		³ / ₄ " PEA GRAVEL	CALIFORNIA GOLD	3" MINIMUM LAYER, WITHIN ALL PLANTING AREAS	AIR VOL BLOCK: 1 SUBURBAN RD, SAN LUIS OBISPO, CA 93401	-								
M-02		BARK MULCH	WALK-ON BARK MULCH, BROWN	3" MINIMUM LAYER IN AREAS OF DISTURBANCE, SEE PLAN	AIR VOL BLOCK: 1 SUBURBAN RD, SAN LUIS OBISPO, CA 93401	_								

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY		OCEA	NO ELEMENTARY	(SCHOOL
	07/10/23	ISSUED FOR BID	DJ	DJ	CL			N & FRONTAGE	IMPROVEMENIS
						Cannon			
-							PLAN II	NG NUIES AP	ND LEGEND
								LP-2.0	
						1050 Southwood Drive	OCEANO, CA		
						San Luis Obispo, CA 93401	DRAWN BY	DATE	CA JOB NO.
						P 805.544.7407 F 805.544.3863	DJ	5/19/2023	210534
						THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE	CHECKED BY	SCALE	SHEET
						OF THE SPECIFIED PROJECT AND SHALL NOT BE USED OTHERWISE OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CANNON.			19 OF 29

- A. REFER TO NOTES AND LEGEND, SHEET LP- 2.0 FOR PLANTING PROCEDURES AND ADDITIONAL INFORMATION.
- B. REMOVE FROM BOX WITH AS LITTLE DISTURBANCE TO THE ROOTBALL AS POSSIBLE.

TREE WELL PLANTING WITH OBSERVATION TUBE SECTION

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SCALE: N.T.S.

LEGEND

- (1) TREE TRUNK
- (2) TREE COLLAR (PLANT PER SPECS)
- (3) PEA GRAVEL MULCH, REFER TO LEGEND AND PLANTING NOTES FOR DEPTH AND TYPE
- (4) TREE OBSERVATION TUBE
- 5 FINISH GRADE
- (6) PLANT TABLETS (3" BELOW GRADE)
- (7) PLANTING PIT W/ ROUGHENED SIDES
- (8) AMENDED BACKFILL MIX (PUDDLE AND SETTLE) REFER TO SPECIFICATIONS
- (9) WIDTH OF TREE WELL
- (10) ROOTBALL
- (11) DEPTH OF ROOTBALL

SECTION

LEGEND

- (1) TREE PLANTING PER PLANTING LEGEND AND DETAILS
- (2) ADJACENT HARDSCAPE EDGE, FINISH GRADE OF PLANTING AREA TO BE 2"
- BELOW (3) ROOT BARRIER AS REQUIRED (SEE
- NOTES BELOW)
- (4) TOPSOIL AND SUBGRADE PER CIVIL PLANS
- (5) ADJACENT GROUNDCOVER OR SHRUB PLANTING

NOTES:

- A. ROOT BARRIERS SHALL BE INSTALLED WHEN TREES ARE WITHIN 5' OF HARDSCAPE U.N.O.
- B. WHERE POSSIBLE INSTALL 10' EACH SIDE OF TRUNK MEASURED PARALLEL TO HARDSCAPE X 24" DEEP.
- C. INSTALL PARALLEL TO WALKS & CURBS.

SCALE: 1/4"=1'-0"

D. DO NOT ENCIRCLE TREE IF POSSIBLE. E. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.

С

PLAN

SECTION

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CK B`

SHRUB PLANTING SECTION

TREE OBSERVATION TUBE DETAIL SECTION

OCEANO ELEMENTARY SCHOOL BY INFILTRATION & FRONTAGE IMPROVEMENTS Cannon PLANTING DETAILS LP-3.0 Oceano, ca 1050 Southwood Drive San Luis Obispo, CA 93401 DRAWN BY DATE CA JOB NO. P 805.544.7407 F 805.544.3863 5/19/2023 210534 DJ THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF CANNON. ALL DESIGNS AND INFORMATION ON THESE DRAWINGS ARE FOR USE OF THE SPECIFIED PROJECT AND SHALL NOT BE USED OTHERWISE OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CANNON. CHECKED BY SCALE SHEET

LEGEND

- (1)SHRUB
- (2) SHRUB CROWN (1" ABOVE FINISH GRADE)
- (3) MULCH, REFER TO SPECS. & PLANTING NOTES FOR DEPTH & TYPE
- (4) 4" HIGH WATERING BERM ALL AROUND
- (5) PLANT PIT W/ ROUGHENED SIDES
- (6) PLANT TABLETS (3" BELOW GRADE)
- (7)AMENDED BACKFILL MIX (PUDDLE & SETTLE)
- 8 TOPSOIL AND SUBGRADE PER CIVIL PLANS
- (9) 2X ROOTBALL DIAMTER MIN.
- (10) ROOTBALL
- (11) DEPTH OF ROOTBALL
- (12)SET FINISH GRADE EQUAL TO THE DEPTH OF MULCH BELOW FINISH SURFACE OF PAVING (WHERE APPLICABLE)
- (13) CURB OR PAVING (WHERE APPLICABLE)
- (14) NEW FINISH GRADE AT SLOPE (WHERE APPLICABLE)
- (15) EXISTING FINISH GRADE AT SLOPE (WHERE APPLICABLE)

SCALE: N.T.S.

LEGEND

- 1) BACKFILL MIX
- (2) GRAVEL FILL AROUND PIPE
- (3) 4" DIA PERFORATED PIPE WITH FILTER SOCK (LENGTH AS REQUIRED)
- (4) PLASTIC ATRIUM DRAIN GRATE
- 5 FINISH GRADE
- (6) UNDISTURBED ROOTBALL

NOTES:

- A. EXTEND PERFORATED PIPE BELOW BOTTOM OF ROOTBALL. SLANT BOTTOM OF PLANTER PIT TO ALLOW ACCUMULATED WATER TO COLLECT AT BASE OF PERFORATED PIPE. SIPHON OFF AS REQUIRED TO PREVENT ROOT ROT.
- B. DO NOT FILL PERFORATED PIPE WITH GRAVEL.

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Α

INTERPRETIVE SIGNAGE GRAPHIC

SCALE: N.T.S.

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MANUFACTURER INFORMATION: IZONE IMAGING WEBSITE: IZONEIMAGING.COM PHONE: (254) 778-0722

LEGEND

- (1) COLOR INTERPRETIVE GRAPHIC PANEL ON A $\frac{1}{2}$ " THICK DURAREADER, EXTERIOR GRADE HIGH PRESSURE LAMINATE PANEL, MATTE FINISH
- (2) 45 DEGREE MOUNTING PLATE (16" x 20")
- (3) SINGLE POST EXHIBIT BASE, POWDER COAT BLACK
- (4) FINISH SURFACE
- (5) 3" LAYER MULCH
- (6) 12" DIAMETER CONCRETE FOOTING
- NOTES:
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS INCLUDING FASTENERS AND SAMPLES OF MATERIALS TO BE USED.
- 2. LANDSCAPE ARCHITECT SHALL PROVIDE COLOR GRAPHICS FOR THE SIGN TO THE CONTRACTOR UPON REQUEST. REFER TO DETAIL A, THIS SHEET.
- 3. THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE EGGSHELL. MATTE. OR ANOTHER NON-GLARE FINISH.
- 4. VERTICALLY DISPLAYED SIGNS MUST BE LEGIBLE AS DEPENDENT ON THE CONTRAST, REFLECTIVITY, LIGHTING, ANGLE OF VISION, AND SIZE.

SCALE: N.T.S.

LEGEND

- (1) PRESSURE TREATED PLYWOOD, $\frac{3}{4}$ " THICK, EXTERIOR, GRADE B. PAINT FRONT AND BACK WITH ONE COAT OF WHITE PRIMER AND TWO COATS OF GLOSS BLACK ENAMEL.
- (2) 4X4 PRESSURE TREATED DOUGLAS FIR POST
- (3) $\frac{1}{2}$ " x 5" LAG BOLT WITH WASHER, 6 REQUIRED. DRILL PILOT HOLES INTO POST, TYPICAL
- (4) FINISH GRADE
- 5 NATIVE SOIL
- (6) CLASS 4 AGGREGATE COMPACTED TO 90% RELATIVE COMPACTION TO EXTEND 6" BELOW POST.
- (7) SIGN GRAPHIC TO BE PRINTED ON RIGID WEATHERPROOF BACKING AND ATTACHED TO PLYWOOD WITH $\frac{1}{2}$ " GALVANIZED STEEL WOOD SCREWS. REFER TO DETAIL C, THIS SHEET FOR SIGN GRAPHIC.

SCALE: $\frac{1}{2}$ " = 1'-0"

PART 1

GENERAL PROVISIONS SECTION 3 - CONTROL OF THE WORK

3-5 INSPECTION

ADD:

- 3-5.1 Landscape Inspections.
- 1. Site observations herein specified shall be made by the Architect during regular business hours. The Contractor or their authorized representative shall be on the site at the time of each observation. The Contractor will not be permitted to initiate the succeeding step of work until they have received approval to proceed by the Architect.
- 2. All changes and deviations to the plans and specifications shall be communicated to the Construction Manager and shall be confirmed in writing.
- 3. The Contractor shall have sufficient work personnel available during normal working hours to correct deficiencies immediately upon request of the Architect. Such repair or re-work services are to be performed without interference of regular project schedule.
- 4. Contractor shall be responsible for notifying the Architect, in advance, for the following observations, according to the time indicated:
- a) Pre-construction conference seven (7) days, immediately prior to the commencement of work of this section, the District. Contractor, and Architect shall meet for the approval of the materials specified, equipment, schedule of work and the method of installation.
- b) Irrigation main pressure test five (5) working days, when irrigation mainline has been installed and valves hung.
- c) Irrigation coverage test five (5) working days, when irrigation system has been installed including all bubbler, sub-surface drip, and overhead irrigation systems.
- d) Layout of trees (trees 24" box size and larger) five (5) working days, when trees are spotted in place for planting, but before planting holes are excavated.
- e) Layout of shrub and groundcover materials five (5) working days, when material is spotted in place for planting, but prior to excavation of planting holes.
- f) Plant materials review five (5) working days. Shrub and tree samples, three (3) each of all species and sizes shall be submitted for approval at the site a minimum of fifteen (15) days prior to planting operations for quality, size, variety, vigor, and rooting characteristics. Approved samples shall remain on the site and shall be maintained, by the Contractor as standards of comparison for plant materials to be furnished.
- g) Completed planting (Pre-plant establishment period) walk through - seven (7) days, when planting and all specified work has been installed and completed, the Architect will prepare a

written "punch list" indicating all items to be corrected. These items must be completed prior to initiating the beginning date of the plant establishment period. The Architect will inform the District and Contractor of the actual date of the start of the plant establishment period in writing. This observation is not the final acceptance of the project and does not relieve the Contractor from any of the responsibilities in the contract documents.

- guarantee/warranty period.
- Architect.
- these observations were made.
- been paid and received.

3-8 SUBMITTALS

ADD:

- 3-8.1.1 Landscape Submittals.
- inclusive):

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h) Final Site Observation and Acceptance of the Project - seven (7) days, At the conclusion of the plant establishment period a final site observation will be made. The Contractor shall show all corrections made from the punch list." Any items deemed not acceptable shall be reworked and the plant establishment period will be extended. The Contractor will be notified in writing that the contract work and plant establishment period has been accepted or that the plant establishment period has been extended to correct any deficiencies remaining. Final acceptance of the project shall establish the beginning date for the

5. Contractor shall be responsible for scheduling site observation visits with Architect as work progresses. Failure to schedule required observations shall not relieve Contractor of responsibility for obtaining approvals. Contractor shall redo, at no cost to the District, work that does not satisfy the District.

6. Observations may be waived or combined at the discretion of the

7. When someone other than the Architect conducts observations, the Contractor shall show evidence in writing of when and by whom

8. No site visits shall commence without adequate preparation or items noted in previous Observation Reports, either completed or remedied, unless the District has waived such compliance. Failure to adequately prepare or accomplish previous punch list items shall make the Contractor responsible for reimbursing the Architect for the site visit at his current billing rates per hour plus transportation costs. No further inspections will be scheduled until this charge has

9. Site observations of the work shall not relieve the Contractor of the obligation to fulfill all conditions of the contract.

1. 15 days after the Contractor has received the District's notice to proceed, the Contractor shall submit to the Architect via email a pdf document with a typewritten list of all materials proposed with quantities, sizes, sources, and quality of materials indicated.

2. Prior to installation of any landscape elements, the Contractor shall submit for approval by the Architect, a list of all materials and equipment proposed for use. Submit product cut-sheets, data, and physical samples (as noted in item 3 of this section) for each material indicated for approval including the following (not all

- a) Soil Amendments & Fertilizers
- b) Plant Fertilizer Tablets
- c) Mycorrhizal Packets
- d) Import Soil
- e) Bark Mulch
- f) Pebble & Cobble Mulches
- g) Landscape Filter Fabric
- h) Erosion Control Netting & Fiber Rolls
- i) Root Barrier
- j) Tree Observation Tube Assembly Components (Including PVC) drainpipe, filter fabric, and drain grates)
- k) Tree Staking Assembly Components (Including tree stakes and tree ties)
- I) Electronic photos in JPEG format of each size and species of tree, fifteen (15) gallon size, 24-inch box size, 36-inch box size and larger. Photos shall be an accurate representation of the actual trees to be utilized on the project. Photos shall be transmitted to the Architect via e-mail and/or other electronic media. Identify each photograph with the full scientific name of the plant (genus, species, variety, cultivar, etc), plant size, and name of the growing nursery (under separate text if needed). Include a scale rod or other measuring device in each photograph. For species where more than 10 plants are required, include a minimum of three photographs of that species showing the average plant, the best quality plant, and the worst quality plant to be furnished.
- Electronic photos in JPEG format of each size and species m) of shrub, vine and groundcover, fifteen (15) gallon size, (10) gallon size, (5) gallon size, (1) gallon size and smaller including flats and plugs. Photos shall be an accurate representation of the actual shrubs and groundcover to be utilized on the project. Photos shall be transmitted to the Architect via e-mail and/or other electronic media. Identify each photograph with the full scientific name of the plant (genus, species, variety, cultivar, etc), plant size, and name of the growing nursery (under separate text if needed). Include a scale rod or other measuring device in each photograph. For species where more than 10 plants are required, include a minimum of three photographs of that species showing the average plant, the best quality plant, and the worst quality plant to be furnished.
- n) Pesticides & Herbicides: Also, include copies of sample label and Material Safety Data Sheet (MSDS).
- o) Remote Control Valve
- p) Valve ID Tags
- q) Pressure Regulating Filter
- r) Manual Ball Valve
- s) Quick Coupling Valve
- t) Tree Bubbler Assembly

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- u) Subsurface Dripline and Connectors, Drip Risers, Staples
- v) Air Vacuum Relief Valve
- w) Manual Flush Valve and Assembly Components
- x) Drip Operation Indicator
- y) Valve Boxes
- z) Filter Fabric
- Irrigation Wire and Tracer Wire aa)
- ab) Wire Connector
- **Detectable Marking Tape** ac)
- Brass Pipe and Fittings ad)
- Pre-assembled Swing Joints ae)
- **PVC** Laterals af)
- **PVC** Mainline ag)
- PVC SCH 80 and PVC SCH 40 Fittings and Connectors ah)
- **PVC Pipe Primer and Solvent Cement** ai)
- Sand for Backfill aj)
- 3. Physical samples for verification for each of the following:
- o) Soil Amendments Actual samples of the soil amendments shall be submitted to the Architect only if requested by the Architect after approval of the soils test.
- p) Plant Fertilizer Tablets 10 tablets in a sealed and labeled plastic bag.
- q) Mycorrhizal Packets 1 sealed Mycorrhizal packet in a sealed and labeled plastic bag.
- r) Imported Topsoil 1 quart volume in sealed plastic bags labeled with composition of materials including the following:
- Gradation limits
- Permeability rate
- Agricultural suitability
- Fertility characteristics as defined in this specification
- Sodium Adsorption Ratio (SAR)
- Soil Organic Matter Content
- Soil Texture & Organic Matter

e) Bioretention Soil Media (BSM)- Submit 1 quart sample in sealed plastic bag labeled with source/supplier of BSM, location of source/supplier, available supplier testing information including agricultural suitability test, whole BSM test results from a third party independent laboratory, and description of proposed methods and schedule for mixing, delivery and placement of BSM.

- f) Pebble & Cobble Mulch Submit 1 quart volume of each pebble and cobble size and type in sealed plastic bags labeled with the project name and pebble/cobble size and color name. Samples should provide an accurate representation of color, texture, and size.
- g)Bark Mulch Submit 1 quart volume of bark mulch in sealed plastic bag labeled with the project name and bark mulch product name.
- h) Landscape Filter Fabric 2'x1' sample of landscape filter fabric in a sealed and labeled plastic bag.
- Delivery Slips: Legible copies of delivery slips for soil 4 amendments, plant materials, rock products, and mulch specifying the quantities that were delivered. The contractor shall provide certificates, trip slips, and invoices to the District prior to final acceptance of the work.
- 5. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of District's' contact persons.
- 6.Substitutions for the indicated materials will only be permitted provided the substitute materials are approved in writing, in advance, by the Architect and the District. All substitute materials shall conform to the requirements of these specifications. If accepted substitute materials are of less value than those indicated or specified, the contract price will be adjusted in accordance with the provisions of the contract.

PART 4

EXISTING IMPROVEMENTS (A) **SECTION 400 - PROTECTION AND RESTORATION**

400-4 PAYMENT.

1.No separate or additional payment will be made for 1) protection of existing improvements, and 2) restoration of existing improvements. Damaged permanent survey markers will be restored by the District at the contractor expense.

PART 8

LANDSCAPING AND IRRIGATION SECTION 800 - MATERIALS

800-1.2.1 General. To paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

1. Furnish a certificate of compliance stating that the material

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meets the specifications.

- 2.Contractor shall comply with the requirements for the soil amendment and fertilizer products specified in this section unless otherwise directed by the soils report for the project.
- 800-1.2.2 Manure. DELETE in its entirety.
- 800-1.2.3 Commercial Fertilizer. DELETE in its entirety and SUBSTITUTE with the following:
- 800-1.2.3 Commercial Fertilizers & Soil Amendments.
 - 1.Commercial fertilizer shall be a pelletized or granular product having the chemical analysis shown on the Plans or specified in the Special Provisions.
 - 2.Commercial fertilizer shall be free-flowing material delivered in unopened sacks.
 - not be used.

ADD:

- 800-1.2.3.6 Pre-Plant Starter Fertilizer.
 - approved equal.

ADD:

800-1.2.3.7 Prilled Post-Plant Fertilizer.

1.Fertilizer shall have (14-7-3) analysis and be used for maintenance - all areas. A maintenance fertilizer shall be used that is granular and homogeneous. Iron and zinc shall be in chelated form and sizing of granules during manufacture is very important. A regular maintenance program using this product for at least the first year is recommended. The homogeneous fertilizer granules used shall contain a fertilizer analysis of 14% nitrogen of which 4% is ammoniac sulfate. Remainder of nitrogen shall be 8.75% water soluble and 1.25% water insoluble. Available phosphorous pentoxide shall be 7%. Potassium oxide shall be 3%. Minor elements shall be chelated 25% by volume consisting of iron 2.0%; zinc 0.15% and manganese 0.15%. By-product calcium shall be 2.0%. Organic nitrogen is derived from urea and cottonseed meal. Phosphate from superphosphate and cottonseed meal. Potash from sulfate of potash and cottonseed meal. No potassium chloride is 'to be used. Sulfur from sulfate of ammonia. Calcium from superphosphate, iron \ from ferrous sulfate and mixed sulfides. Zinc and manganese are expressed as metallic and in their elemental form. Screen Analysis (% retained) approximately: 4-mesh 1.3%; 8 mesh = 24.2%; 20-mesh = 74.0%; and

3.Material which becomes caked or otherwise damaged shall

1.Fertilizer shall be (1-10-10) analysis and shall be a commercial grade flowable fertilizer with a 1% nitrogen analysis; 10% phosphorous pentoxide and 10% potassium oxide. No potassium chloride is to be used. Organic nitrogen shall be from cottonseed meal and urea. Phosphorous. from superphosphate and cottonseed meal. Potassium (potash) from sulfate of potash and cottonseed meal. Screen analysis 74% to be retained on a 20-mesh screen. 0% to pass a 4-mesh screen, and 2 % to pass a 48-mesh screen. The commercial grade product used shall be Wil-Gro, Gro-Power, Bandini, Kellogg, or

48-mesh = 0.05%. The commercial grade product u Wil-Gro Fairway, Gro-Power, Bandini, Kellogg, or a equal.

ADD:

- 800-1.2.3.8 Plant Fertilizer Tablets.
 - 1.Product:
 - a) Planting tablets shall be tightly compressed ch commercial grade planting tablets, of varying si following available percentages by weight of pla
 - 20.0 % min. Nitrogen
 - 10.0% min. Phosphoric acid
 - Potash 5.0 % min.

The commercial grade product used shall be A approved equal.

- 2.Installation:
 - a) Planting tablets shall be installed at the rates in below per planting container size or per manuf recommendations:
 - 1 Gallon and smaller 1, 21-Gram tablet
 - 2 Gallon 2, 21-Gram tablets
 - 3 Gallon 3, 21-Gram tablets
 - 5 Gallon 3, 21-Gram tablets
 - 7 Gallon 5, 21-Gram tablets
 - 15 Gallon 10, 21-Gram tablets
 - 24" Box 24. 21-Gram tablets
 - 36" Box and larger Use manufacturer rat
 - b) Random testing to verify planting tablet installat conducted by the District or Architect.

ADD:

800-1.2.3.9 Mychorrizal Packets.

- 1.Product:
 - a) Mycorrhizal packets shall be 4-gram Myco Pake Enterprises or approved equal.
 - b) Mycorrhizal packets shall contain eleven speci mycorrhizal fungi in the following species and concentrations:
 - Glomus intraradices, G. mosseae, G. aggreg etunicatum - 33 propagules/gm each.
 - Rhizopogon villosullus, R. luteolus, R. amylo fulvigleba - 5500 propagules/gm each.
 - Pisolithus tinctorius 200,000 propagules/gr
 - Scleroderma cepa, S. citrinum 11,000 prop each

2.Installation:

a) Place Myco-Paks at the base of the planting hole.

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ised shall be pproved	b) El ad	nsure direct contact with plar chieved.	nt roots and Myco-Paks is
	c) Pl M ac	ace 1 Myco Pak per plant up yco-Pak to the planting holes dditional foot of height or wid	o to 1 foot of height. Add s at equal spacing for each th.
· ,	d)Pl co	ace Myco-Paks at the rates ontainer size.	shown below per plant
ip type izes with the	•	Smaller than 1 gallon size	1/2 Pak
ant food:	•	1 Gallon size	1 Pak
	•	5 Gallon size	3 Paks
	•	15 Gallon size	8 Paks
	•	24" Box size	12 Paks
griform or	•	36" Box size	18 Paks
	•	48" Box size and larger	22 Paks
ndicated acturer	800-1.2.5 Mulc following:	h. DELETE in its entirety and	SUBSTITUTE with the
	1.Mulch require	shall be designated by Type ements herein.	in accordance with the
	2.Unless bulk.	otherwise approved, mulch	shall be packaged in
	3.Mulch deleter follows	materials shall be free of see rious materials as certified by s:	ed, debris, and / the Supplier and shall be as
	a) Ty by	ype 1 Mulch (ground wood p / Agriservice (760 295-6255)	roduct) shall be Forest Mulch or approved equal.
es	i.	Type 1 Mulch shall have the	e following characteristics:
tion shall be	•	Natural, medium brown grou reduce erosion and water lo	undcover that knits down to ss.
	•	Composed of assorted tree eucalyptus, pepper tree, pin wood and bark. No animal w or C&D wood by-products in	trimmings (including ie, and other tree wood), waste, sludge waste, lumber included in mulch.
s by Tri-C	•	Typical particle size of one to product, by volume, to confe	to three inches. 95% of the orm to this particle size
		range.	
	•	Holds well on slopes for ero	SION CONTROL
gatum, G.	١١.	Type 1 Mulch Installation:	$\sim 0^{2}$ double in relation on c
pogon, R	•	specified in planting plans.	rm 3° depth in planter areas
n bagules/gm	•	Provide 4-inches of horizont collar of tree trunks, 3-inche away from the collars of shr grasses, and 2-inches of ho the basal stem of ground co	tal clearance away from the es of horizontal clearance rubs and ornamental prizontal clearance away from overs.

b) Type 2 Mulch (rock, gravel, or cobble) shall be pebble, or cobble in the size specified in the Contract Documents. Type 2 Mulch shall comply with the requirements specified in Section 200-1.7.

800-1.3 Seed. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Seed shall be fresh, clean, new crop seed, and mechanically premixed to the specified proportions.
- 2. Seed shall be delivered to the Work site in original unopened containers bearing the dealer's "Guaranteed Analysis", germination percentage, and a certificate, stamp, or release by a County Agricultural Commissioner. Any seed tagged "Warning, Hold for Inspection" shall be inspected and released by the Agricultural Commissioner of the County within which the seeds are to be planted.
- 3. All seed used for lawn, erosion control, or other planting specified on the Plans or listed in the specifications shall be furnished in labeled and sealed standard containers with duplicate signed copies of a statement from the vendor certifying that each container of seed delivered is fully labeled in accordance with the California State Agricultural Code stating the certified percent of purity and germination.
- 4. Seed which has become wet, moldy, or otherwise damaged in transit or storage shall not be accepted.
- 5. Custom seed blends shall have the Project name printed on the seed tag. Prior to the start of any seeding operation, custom seed blends shall be inspected and approved by the Engineer once delivered to the Site.
- 6. Turf Seed Species: Turf seed species shall be Whittet- Kukuyu manufactured by Stover Seed Company, located at 9180 San Fernando Road, Sun Valley, CA 91352, www.stoverseed.com, or approved equal.
- 7. Seed shall have 95% minimum purity and 80% minimum germination.

800-1.4.1 General. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Plants shall be inspected and approved by the Engineer prior to planting at the time of arrival to the job site. Prior to 15 Working Days before installation, the contractor shall submit photos of all proposed plants to be used in accordance with 3-8.1.1, "Landscape Submittals".
- 2. Plants shall have a growth habit normal to the species and shall be sound, healthy, vigorous, and free from insect pests, plant diseases, sun scalds, fresh bark abrasions, excessive abrasions, or other objectionable disfigurements.
- 3. Plant materials shall not contain any deleterious, obnoxious, or invasive weeds such as (not all inclusive): Quackgrass, Johnsongrass, Poison Ivy, Nutsedge, Nimblewill, Canada Thistle, Bindweed, Bentgrass, Wild Garlic, Ground Ivy,

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Perennial Sorrel and/or Bromegrass.

- is specified.
- 6. Plants shall have normal well-developed branch systems and vigorous and fibrous roots systems which are neither root nor pot bound and are free of kinked or girdling roots.
- 7. Other than the normal side pruning during the growth period, pruning shall not be done prior to inspection at the nursery. At no time shall the plant materials be pruned, trimmed, or topped prior to delivery, and any alteration on the site of their shape shall be conducted only with the approval and in the presence of a certified arborist.
- 8. The scientific and common names of plants specified shall conform to the approved names given in the "Western Garden Book" published by Sunset Publishing, Menlo Park, CA.
- 9. When delivered on site, each group of plant materials shall be labeled clearly from the nursery source as to species and variety. Patented plants (cultivars) required by the plant list shall be delivered with a proper plant patent attached. Any plants which are not labeled or are not as indicated on the Plans and Specifications shall be rejected and shall be removed from the site immediately.
- 10. Inspection of plant materials: Plants shall be subject to inspection and approval or rejection at the project site at any time before or during progress of work for size, variety, condition, latent defects and injuries. Rejected plants shall be removed from the project site immediately.
- 11. Inspection of plant materials required by District, county, state, and/or federal authorities, and/or other regulatory agencies, shall be the responsibility of the Contractor. When necessary, the Contractor shall have secured permits or certificates prior to delivery of plants at site.
- 12. Rejection and substitution: All plants not conforming to the requirements herein specified and/or as indicated on the drawings shall be considered defective, and such plants, whether in place or not, shall be marked as rejected and be immediately removed from the site of the work and replaced with acceptable plant materials. Under no condition will there be any substitution of plant species, variety, or reduced size for those listed on the accompanying drawings, except with the express written consent of the Landscape Architect.
- 13. Right to changes: The Architect reserves the right to change the plant species, plant variety, and/or sizes of plant material to be furnished, provided that the cost of such plant changes does not exceed the cost of plants in the original bid. The Contractor shall be notified in writing sixty (60) days before the planting operation has commenced. Field changes to the plant species, plant variety, and/or sizes of plant material might be required due to current availability and shall be coordinated with the Architect and District. Changes in the size and/or variety of any plant to be furnished which involves

4. All plants shall equal or exceed any measurements specified and shall be supplied from the source indicated when a source

5. Tree trunks shall be sturdy and well "hardened off".

a reduction or addition in cost shall be adjusted in the contract cost.

- 14. Container stock: Shall have grown in containers for at least six (6) months and through one (1) full growing season, but not over two (2) years. Samples shall be shown to prove that no girdled roots, circled roots, and/or root-bound conditions are present. Any such trees or shrubs shall be deemed as not acceptable. All container plants or trees that have a cracked or broken rootball when taken from the container shall not be planted except on special approval from the District or the Architect.
- 15. Root condition: The Architect reserves the right to inspect root condition of any species, particularly those grown from seed, and if found defective, to reject the plants represented by the defective sample.
- 16. Protection: All plants at all times shall be handled and stored so that they are adequately protected from drying out, from wind burn, and from all other injury. All plants determined by the Architect or District to be wilted, burned, or dried out, may be rejected at any time, whether in the ground or not. All plants shall be handled solely by their containers and all plants that have been handled by the stem or trunk shall be rejected, and removed from the site immediately. The Contractor's on-site plant storage area shall be approved by the General Contractor prior to the delivery of any plant materials.
- 800-1.4.2 Trees. ADD the following:
 - 1. Trees shall have a uniform trunk taper from the base of the tree, continuing up the main leader. Palms shall be un-skinned unless specified otherwise.
 - 2. Trees with naturally occurring central leaders shall remain un-pruned or unaltered from the nursery.
- 800-1.5.4 Tree Ties.
 - 1. Tree ties shall be manufactured of virgin flexible vinyl meeting ASTM-D412 standards for tensile and elongation strength. Material shall be black or ultraviolet resistance.
 - 2. Tree ties shall be manufactured with a double back locking configuration and secured with one galvanized nail to prevent slippage.
 - 3. Tree ties shall elongate with the tree growth and shall prevent damage to the tree.
 - 4. Tree ties shall be "Cinch Tie" or approved equal.

ADD:

800-1.7 Tree Root Barrier.

- 1. Product:
 - a) Polyethylene (0.08 inch thick) or polypropylene (2.032 - 2.16 mm thick), with self-locking joiners, $\frac{1}{2}$ " raised 90 degree molded root deflecting ribs, ground lock tabs, double top edge, UV inhibitors. Use 24" barrier unless otherwise stated. Root barrier by Deep Root, 101 Montgomery Street, Suite 2850, San Francisco, CA 94104, 415-781-9700, or approved

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ADD:

equal

b) Root barrier shall have the following characteristics:

Property	ASTM	Value
Tensile Stress Yield	ASTM 638	3800 PSI
Elongation @ Break%	ASTM D638	10% (varies by
		product length)
Tensile Modulus	ASTM D638	155,000 PSI
Notched Izod Impact	ASTM D256A	0,4-4,0 (varies by
		product length)
Flexural Modulus	ASTM D790	145,000 PSI (varies
		by product length)
Hardness Shore	ASTM D2240	P66 (varies by
		product length)

2. Installation:

- a) Install root barrier as per manufacturer's recommendations.
- b) Root barrier shall be installed where trees are planted within five-feet (5') of paving or other hardscape elements or wet utilities (such as walls, curbs, walkways, etc.).
- c) Root barrier shall be aligned vertically and run in a linear fashion, along and directly adjacent to paving or other hardscape elements or wet utilities to be protected.
- d) Install root barrier along the edge of paving or hardscape element for a distance of 10 feet (10') in each direction from the tree trunk. for a total of twenty-feet (20') per affected tree. Where trees are closer than ten-feet (10') apart, a single continuous piece of root barrier shall be used. The Engineer may allow for alterations to the root barrier in order to accommodate necessary root locations based upon an arborist report.
- e) Root barrier shall not surround root ball of tree at any time except where trees are surrounded by paving (as in courtyard tree groves).
- f) Tops of root barriers are to be $\frac{1}{2}$ above finish grade of soil, with no portion visible above mulch.
- g) Do not damage root barrier during construction activities.
- h) Fasten root barrier panels together at splices with zipper joining system

800-1.8 Landscape Filter Fabric.

1. Product:

- a) Geotextile filter fabric shall be a nonwoven geotextile composed of polypropylene fibers, formed into a stable network such that fibers retain their relative position.
- b) Geotextile filter fabric shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids.

- c) Geotextile filter fabric shall block 95% of weed growth and be permeable to air, water, gasses and fertilizer.
- d) Geotextile filter fabric shall be Mirafi #140N, as manufactured by Mirafi Construction Products, Inc. 365 South Holland Drive, Pendergrass, Georgia 30567, (706) 693-2226, www.tcmirafi.com/products/productnindex2.html or approved equal

Property	ASTM	Value
Grab Tensile Strength	ASTM D4632	Min. Average Roll
		Value 120 lbs.
Grab Tensile	ASTM D4632	Min. Average Roll
Elongation		Value 50%
Trapezoid Tear	ASTM D4533	Min. Average Roll
Strength		Value 50 lbs.
CBR Puncture Strength	ASTM D6241	Min Average Roll
		Value 310 lbs.
Apparent Opening Size	ASTM D4751	Maximum Opening
		Size 70 (0.212)
Permittivity	ASTM D4491	1.7 sec-1
Flow Rate	ASTM D4491	135 gal/min/ft2
UV Resistance	ASTM D4355	70% strength retained

- 2. Installation:
- a) Place the landscape/geotextile filter fabric over the base course or compacted soil so it is smooth and wrinkle free
- b) Overlap filter fabric rolls by 6" min. at fabric roll edges.

ADD:

- 800-1.9 Pesticides & Herbicides
 - 1. Products:
 - a) General: Pesticides and herbicides shall be registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides/herbicides unless authorized in writing by authorities having jurisdiction
 - b) All Pesticides, herbicides and other chemicals used shall be reviewed and approved by the District and Architect prior to purchase or use.
 - c) Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer. Pre-Emergent Herbicide shall be Ronstar 2G as manufactured by Bayer Environmental Science, Canada (888 283-6847) or approved equal.
 - d) Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated. Post-Emergent Herbicide shall be non-toxic, eco-friendly herbicide such as A.D.I.O.S. Selective Organic Weed control or approved equal.
 - 2. Application:
 - a) Apply pesticides/herbicides and other chemical products and biological control agents in accordance with manufacturer's written recommendations.
 - b) Coordinate applications with District's operations and others in proximity to the Work.

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c) Notify District before each application is performed.

- recommendations.
- Fittings. ADD the following:
 - inch (50 mm) and larger.

 - 40.

ADD:

- 800-2.1.3.1 Pipe Primer and Glue.

ADD:

- 800-2.1.3.2 Pipe Sleeves.

ADD:

- 800-2.1.6 Concrete Thrust Blocks.
 - Class".

800-2.2.3 Manual Control Valves. DELETE in its entirety and

d) No restricted pesticides shall be used.

e) Pre-Emergent Herbicides (Selective and Non-Selective): Apply to all tree, shrub, and groundcover areas in accordance with manufacturer's written recommendations. Do not apply to seeded or hydroseeded areas.

f) Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written

800-2.1.3 Plastic Pipe for Use with Solvent Weld Socket or Threaded

1. Purple color Schedule 40 and Class 315 pipe shall be used for continuously pressurized pipe on the supply side of control valves as shown on the Plans. Use Schedule 40 pipe for 1-1/2" (38 mm) main line and Class 315 pipe for main line sizes two

2. Purple color Schedule 40 pipe shall be used for installation on the discharge side of control valve (lateral lines).

3. Fittings and couplings for plastic pipe shall be threaded or slip-fitted tapered socket solvent weld type. Threaded female adapters shall be provided with socket pipe for connections to threaded pipe. Plastic pipefitting and coupling shall be PVC I or PVC I/II material. The type of plastic material and schedule size shall be indicated on each fitting or coupling.

a) All fittings on pressurized main lines shall be Schedule 80.

b) All threaded fittings shall be Schedule 80.

c) Slip fittings for non-pressure lateral lines shall be Schedule

4. Fittings and couplings shall comply with the following table:

1. Refer to 207-17.3.3, "Solvent Cement Joints"

1. Pipe sleeves shall be purple color Schedule 40 pipe and shall be 2 times the diameter of the pipe or wire bundle being sleeved with a minimum size of 2 inches (50.8 mm). Pipe sleeves shall extend 12 inches (304.8 mm) beyond the edge of hardscape and shall be required when wires and pipes cross under streets, driveways, walkways, and access paths. Pull boxes shall be located over the terminus of the sleeve. At the end of the sleeve, wires shall extend up into the pull box and shall provide a 2 foot (0.6 m) expansion loop.

1. Refer to 201-1.1.2, "Concrete Specified by Class and Alternate

SUBSTITUTE with the following:

800-2.2.3 Manual Control Valves.

1. Manual control globe valves shall be brass or bronz be straight pattern globe valves. Valves shall be full key-operated with a replaceable compression disc, have ground joint unions on the discharge end. Valv have a brass or bronze cross handle.

800-2.2.4 Remote Control Valves. DELETE in its entirety an SUBSTITUTE with the following:

- 1. Remote control valves shall be:
- a) Electrically operated.
- b) Brass or bronze with accurately machined valve surfaces.
- c) Equipped with flow control adjustment and capab manual operation.
- d) Made so that they may be readily disassembled
- 2. Plastic remote control valves shall be electrically op may be used only when specified or with prior appre the Engineer. Unless otherwise specified, the valve be constructed of heavy-duty glass- filled UV-resista and have stainless steel studs and flange nuts. Diap shall be of nylon reinforced nitrile rubber with accur machined valve seat surfaces equipped with flow co adjustments and shall be capable of manual operat internal parts shall be removable from the top of the without disturbing the valve installation.

800-2.2.6 Quick-Coupling Valves and Assemblies. DELETE entirety and SUBSTITUTE with the following:

- 1. Quick coupling valves shall be brass or bronze with valves and shall be supplied in 3/4 inch (20 mm) size otherwise specified.
- 2. When a quick-coupler assembly is specified, it shall the valve, quick- coupler key and hose swivel.
- 3. Quick coupling valves shall have a locking vinyl cap

800-2.2.7 Valve Boxes. DELETE in its entirety and SUBSTI the following:

1. Valve boxes shall be commercial grade, profession type, integral green colored, with locking bolt-down by Carson-Brooks, Ametek, or approved equal. Inc stainless steel bolt and stainless steel washer for ea box.

a) For remote control valve: 10" x 19" nom. plastic b) For ball or gate valve: 10" diameter round plastic

- c) For quick coupling valve box: 10" diameter round
- d) For wire splice box, pull box and spare wire box: diameter round plastic box.
- e) Valve box extensions shall be of the same manu and color as existing valve box to be adjusted to

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ze and shall	800-2.2.13 Drip System Cor	mponents.		
ll-opening, and shall lves shall	 Drip Pressure Regulations shall consist of a pl and a preset regulation pressure. 	ulating Filter. The astic body and b itor for maintaini	e pressure regu ell housing, a f ng the downstre	ulating filter ilter screen eam
nd	2. Drip Air Vacuum Re valve assembly sha	elief Assembly. T all be shall be as	The drip air vac specified in the	uum relief e drawings.
	3. Drip Flush Valve As be shall be as spec	ssembly. The dri ified in the draw	p flush valve as ings,	ssembly shall
seat	 Dripline, Fittings an in the drawings. 	d Staples.The d	ripline shall be	as specified
oility for	5. Drip Operation Indie installed with comp instructions.	cator. The drip o onents in the de	peration indica tails, and per m	tor shall be nanufacturer's
for servicing.	ADD:			
perated and roval from	800-2.4 Sprinkler Equipmen with the following:	it. DELETE in its	entirety and S	UBSTITUTE
e body shall ant nylon phragms rately control tion. All	 Sprinkler heads, but the types and sizes and flow characteris and all equipment s identification code i the installed positio 	bbler heads, and shown on the F stics shall be fro shall bear the ma n a position whe n.	d spray nozzles Plans. Equipme m the same ma anufacturer's na ere they can be	s shall be of nt of one type anufacturer ame and identified in
	2. Sprinkler heads use existing equipment model number	ed for replacing of same	or adding to zol e type, manufac	nes with cturer and
E in its	ADD:			
n self-closing zes, unless	800-2.5 Extra Equipment to 1. The contractor shal the final Acceptanc Special Provisions:	Be Furnished. I provide the foll e, unless otherw	owing to the Di /ise specified o	strict prior to n the Plans or
Il consist of				
р.				
TUTE with				
nal irrigation green lids, clude each valve				
valve box. c box. d plastic box. : 10"				
lfacturer, size finish grade,				
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	Cannon	LANDSC	APE SPECIFI LS-4.0 oceano, ca	CATIONS
THESE DRAWI CANNON. ALL OF THE S	1050 Southwood Drive San Luis Obispo, CA 93401 P 805.544.7407 F 805.544.3863	DRAWN BY DJ CHECKED BY	DATE 5/19/2023 SCALE	CA JOB NO. 210534 SHEET
	WITTOUT THE LAFNESSED WRITTEN PERMISSION OF CANNON.]	1	1 20 UF 23

unless when fully buried below finish grade.

ADD:

- a) Two (2) irrigation heads with nozzles of each type used for every irrigation head installed.
- b) One (1) valve key for quick coupler assemblies installed or portions thereof.

800-3.2.1 Conduit. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Rigid non-metallic conduit shall conform to the requirements of the UL Standard for Rigid Non-Metallic Conduit, Publication UL 651 (PVC Schedule 80) and UL 651B (HDPE). Rigid non-metallic conduit connections shall be of the solvent weld type. For underground installation, conduit shall be UL approved heavy wall polyvinyl chloride (PVC Schedule 40) unless specified otherwise on the Plans or Special Provisions.
- 2. A manufactured weatherproof plastic identification tag showing the irrigation controller and station shall be affixed to the colored conductor wire in each valve and pull box.
- 3. Common Wires and Tracer Wires: Common wires shall match existing wire type and gauge, and color coded the same as existing common wire connecting to. Tracer wires shall be #12 AWG direct burial type.
- 4. Wire Bundles: Tape wire bundles with colored vinyl electrical tape 10 feet (3 m) on center. Use different color tape for each controller.

ADD:

800-3.2.2.1 Wire Connectors.

- 1. Wire connectors for direct burial irrigation control wires of 30 volts or less shall be capable to accommodate #18, #14, #12 and #10 gauge wire sizes and shall be designed to ensure waterproof connections. The wire connector kit shall contain a UL and CSA listed copper crimp sleeve, polyethylene connector body, and polyethylene connector plug. The connector plug shall be filled with blue color self-curing epoxy resin sealant immediately prior to assembly of the wire connector to fully waterproof the connection.
- 2. Wire connectors shall be installed in accordance with the manufacturer's recommendations.

ADD:

800-3.2.2.2 Trench Marker Tape.

Trench marker tape for irrigation systems supply lines shall be 3 inches wide and consist of a minimum 5.0 mil overall thickness with a 0.35 mil solid aluminum foil core. Marker tape shall be acid, alkaline and corrosion resistant. Lettering shall be 1 inch (25.4 mm) height minimum, with purple color designation and with the words "Non-Potable Irrigation".

SECTION 801 - INSTALLATION

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following:

- 1. This section includes specifications for the preparation, planting, and irrigation system construction for landscape areas shown on the Plans.
- 2. Unless otherwise specified, walls, curbs, planter boxes, walks, irrigation systems, and similar improvements shall be constructed following rough grading and before landscaping and irrigation work.
- 3. Work on the irrigation system including hydrostatic tests, backfill and densification of trenches, and other excavations shall be performed before topsoil placement. Preliminary operational tests of the automatic control system and coverage tests shall be performed after topsoil placement.

following:

- 1. Unless otherwise specified on the Plans or Special Provisions, the topsoil shall be Class A and shall be 15 inches (381 mm) thick.
- 2. Planting areas shall be free of weeds and other extraneous materials to a depth of 12 inches (304.8 mm) below finish grade before topsoil Work.
- 3. Soil shall not be worked when it is so wet or so dry as to cause excessive compaction or the forming of hard clods or dust.
- 4. The existing soil below subgrade for Class "A" and Class "B" topsoils shall be scarified in a cross pattern to a depth of 6 inches (152.4 mm) prior to placement of topsoil. Stones over 1 inch (25.4 mm) in greatest dimension shall be removed from the scarified area. The subgrade depth shall be verified by the Engineer prior to topsoil import.
- 5. Class "C" topsoil shall be scarified and cultivated to a finely divided condition to a depth of 8 inches (203.2 mm) minimum below finish grade. During this operation, all stones over 1 inch (25.4 mm) in greatest dimension shall be removed.
- 6. The soil shall be prepared in accordance with the recommendations of the soil analysis results stated in 800-1.1.2, "Class 'A' Topsoil".
- 801-2.2.2 Fertilizing and Conditioning Procedures. DELETE in its entirety and SUBSTITUTE with the following:
 - 1. All planter areas shall be deep-ripped and loosened to a depth of 12-inches in all directions.
 - 2. All sub-surface rocks over 2-inches in diameter and other underground obstructions shall be removed to the depth necessary to permit proper fine grading, tilling, or planting according the the plans and specifications to a minimum depth of 12-inches.
 - 3. The planting area shall be brought to finish grade before spreading the fertilizers or soil conditioning materials specified in the soil test recommendations.

801-1 GENERAL. DELETE in its entirety and SUBSTITUTE with the

801-2.2.1 General. DELETE in its entirety and SUBSTITUTE with the

- 4. If leaching is required per the recommendations test recommendations, amendments shall be ble the soil prior to leaching with the exception of soi gypsum, soil sulfur, iron sulfate, and pre-plant fer Leaching shall be performed until analysis results compliance with agriculture suitability standards. amendment materials shall be uniformly spread prescribed rate as recommended in the soil test recommendations.
- 5. The quantities of materials necessary for the plan shall be at the Work site and verified by delivery furnished to the Engineer before spreading.
- 6. After spreading, the soil amendments shall be cu the upper 15 inches (381 mm) of soil by suitable operated in at least 2 directions at right angles.
- 7. Contractor shall apply the amendments below to areas. This is for bidding purposes only and the amendment recommendations of the soils report supersede these guidelines.
- Soil Conditioner: 4 cu.yd. sq. ft.
- Gypsum: 1,000 sq. ft.
- 20 poun Soil Sulfur: sq. ft.
- Iron Sulfate: 20 pour sq. ft.
- Triple superphosphate (0-45-0) 4 pound sq. ft.
- Potassium sulfate (0-0-50) 1,000 sq. ft.
- 8. The resulting soil shall be in a friable condition.
- 9. All planting areas shall be fertilized in a uniform the application rate identified in the soil analysis recommendations.
- 10. Fertilization of turf areas shall be accomplished uniformly spreading 50% of the specified quantity direction. The remaining 50% of the fertilizer quart spread perpendicular to the previous direction, in after the initial application. Each of the application spread uniformly in parallel, overlapping passes, uniform results.

801-2.3 Finish Grading. DELETE in its entirety and SUBST the following:

> 1. Finish Grading shall provide a smooth, uniform su with loose, uniformly fine texture. Roll, drag and remove ridges, and fill depressions to meet finish Rake out and remove all rocks and material 1/2-i larger. Prior to approval, remove ridges greater th and fill depressions greater than 1/2 inch within a (10-foot x 10-foot) area.

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of the soil ended into il conditioner, rtilizer. s are in Soil at the	 2. Finish grades shall be as indicated on the Plans. 3. Finish grades shall be measured at the top surface of surface materials. 4. Molding and rounding of the grades shall be provided at all changes of slope.
nting areas tickets	
ultivated into equipment	
all planter soil t shall	
. per 1,000	
00 lbs. per	
nds per 1,000	
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manner at	
d by y in one intity shall be nmediately ins shall be to provide	
ITUTE with	
urface plane rake to n grades. inch size and han 1/2 inch a 100 sq. ft.	

- 5. Take every precaution to protect and avoid damage to new and existing sprinkler heads, irrigation lines, and other underground utilities during grading and conditioning operations.
- 6. Finish grades shall be acceptable to Engineer before planting operations begin.
- 7. Finish grade shall ensure positive drainage of the site with all surface drainage away from buildings, other structures, and walls with flow towards storm drains and catch basins.
- 8. General planting areas shall be graded with no less than 2 percent surface slope for positive drainage.
- 9. Sports Field turf areas (softball fields, baseball fields and multi-purpose fields) shall be graded with a 1.5% minimum and 2% maximum surface slope for positive drainage unless indicated otherwise on the drawings. Sports Fields shall be laser graded in accordance with the Sports Turf Managers Association pamphlet "Laser Grading Sports Fields" available at www.STMA.org.
- Compact blended planting soil to 80 percent minimum to 85 percent maximum of maximum Standard Proctor density according to ASTM D 698 unless otherwise shown on Plans.
- 11. The finish grade adjacent to paving, curbs, or headers shall be $\frac{1}{2}$ inch (12.7 mm) in lawn areas and 3 inches (76.2 mm) in shrub and groundcover areas.

801-4.1 General. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Actual planting shall be performed during those periods when weather and soil conditions are suitable and in accordance with locally acceptable practice.
- 2. The types, sizes, and quantities of plant materials shall be as specified in the Special Provisions or shown on the Plans.
- 3. All plants shall be reviewed and approved prior to planting, including plants previously approved at the nursery. The contractor shall be responsible for the condition of all plants, planted or otherwise, until the completion of the Work.
- 4. Planting shall be performed with materials, equipment, and procedures favorable to the optimum growth of the plants and in compliance with these procedures.
- 5. Except as noted for specimen planting, all planting shall follow the completion of the irrigation system.
- 6. Soil shall be fertilized and all soil leaching completed prior to planting per the recommendations of the soil analysis results.
- 7. Application of the pesticides and herbicides shall be as specified in the Special Provisions.

801-4.3 Layout and Plant Location. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Prior to planting, perform a detailed layout within the planting areas to be approved by the Engineer.
- 2. The first row of plants in areas designated for center-to-center spacing of plants shall be located at one-half of designated

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spacing form the edge of the area unless specified otherwise on the Plans or Special Provisions.

- direction of the Architect.
- SUBSTITUTE with the following:

 - prior to planting.

 - prevent settling.
 - improvements.

 - 10. report prior to use.

3. Plants shall be located to prevent irrigation blockage.

4.Layout of trees: All trees 24" box size and larger (including any specimen bareroot palms) shall be placed in the landscape per the direction of the Architect prior to installation of irrigation system. The trees shall then be moved so that planting holes can be excavated and amended. The trees shall then be installed in their respective holes and positioned in the holes per

5.Layout of planting: Locations shall be approved by the Architect. All container plants shall be set by the Contractor in their final location in their respective containers prior to digging holes and/or planting. All plant locations shall be checked for possible interference with existing underground utility lines.

801-4.5 Tree and Shrub Planting. DELETE in its entirety and

1. Planting holes shall be the depth of and twice the width of the plant container or ball and shall be larger, if necessary, to permit handling and planting without injury or breakage of the root ball or root system. Any plant with a broken or cracked root ball before or during planting shall not be planted.

2.Plant holes shall not be augured. This produces a smooth wall that deters lateral root growth. Smooth edges shall be scarified

3.Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.

4.Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.

5. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to

6. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing

7.Excavation shall include the stripping and stacking of all acceptable soil encountered within the areas to be excavated for plant pits and planting beds. Protect all areas that are to be trucked over and upon which soil is to be temporarily stacked pending its re-use for the filling of holes, pits, and beds.

8. Maintain supervision of excavations during working hours.

9.Keep excavations covered or otherwise protected when unattended by Installer's personnel.

Subsoil and topsoil removed from excavations may be used as planting soil. Amend any excavated soils per the soils

11. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

Hardpan Layer: Drill 6-inch diameter holes, 24-inches 12. apart, into free draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

14. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

15. Containers shall be removed in such a manner that the roots are not injured. Balled plant wrappings shall be loosened or cut back after the plant is positioned in the planting hole.

The native soil at the bottom and sides of planting holes shall be scarified.

Prepared backfill mix for shrub planting shall consist of 17. 20% to 40% by volume of Type 1, 2, or 3 organic soil amendments mixed with native soil, depending on soil conditions at each site, as approved by the Engineer. On projects requiring soil analysis of native soil, backfill mix shall be determined by the recommendation of the soil analysis results and as approved by the Engineer.

18. Planting installation shall conform to the following requirements:

a) The bottom of the planting pit shall be compacted.

- b) Carefully remove root ball from container without damaging root ball or plant.
- c) Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- d) The plant shall be set at the approximate center of the hole 801-4.6.1 Method "A" Tree Staking. DELETE in its entirety and and plumb so that the crown of the plant is 1 inch (25.4 mm) SUBSTITUTE with the following: above finish grade.
- e) Backfill shall be added in 6-inch (152.4 mm) lifts and shall be 801-4.6.1 Tree Staking. hand tamped to finish grade.
- f) Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
- g) Use planting soil with the heretofore specified amendments for backfill.
- h) Do not cover the top of the rootball with backfill soil, which might create soil interface conflicts and inhibit aeration and gaseous exchange.
- i) The backfill shall be thoroughly water-settled and additional backfill added to fill any remaining void below finish grade.
- j) After the water has drained, the specified number of fertilizer tablets shall be placed in the planting hole in the presence of the Engineer. Place planting tablets in each planting pit when pit is approximately one half filled; in amounts recommended

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in this specification. Place tablets beside the root ball about 1-inch from root tips; do not place tablets in bottom of the hole.

- k) Except within tree grates, a circular watering basin shall be constructed at the edge of the tree planting pit. The basin berm shall be 4 inches (101.6 mm) high. The bottom of the basin shall be at approximate finish grade or slightly lower. The specified mulch shall be spread at least 3 inches (76.2 mm) thick in the basin leaving 3 inches (76.2 mm) of clearance around the base of shrubs and 4 inches (101.6 mm) at tree trunks.
- I) When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.
- Basins of planted container material shall not be planted or 19. seeded.
- After planting, the plant shall be plumb, with the root crown 1 inch (25.4 mm) above finish grade.
- Soil moisture level in planting areas at time of planting shall 21. be no less than horticulturally acceptable. The Contractor shall request approval of moisture, and if found to be insufficient for planting, the planting pits shall be filled with water and allowed to drain before starting any planting operations.
- Create rootball drainage for all boxed trees by removing the bottom of the box before planting or cutting drainage holes in the bottom of the box, or separating the boards on the bottom after planting, or other approved method.
- The Contractor shall be responsible for all surface and subsurface drainage required which may affect his / her guarantee of the trees, shrubs, ornamental grasses and vines.
- 1. Trees shall be staked with the type and length of stake in accordance with 800-1.5.3, "Tree Stakes". Tree ties shall be in accordance with 800-1.5.4, "Tree Ties".
- 2. All trees and any other plants indicated on the plans shall be staked per detail.
- 3. Stakes shall be driven into the ground of the windward side of the tree. The stakes shall be driven in plumb and secure. Special care shall be taken that the driving in of the stake does not damage the tree bark, tree roots or root ball.
- 4. Tree ties shall be wrapped around the tree trunk and the stake, twisting to form a figure-eight. The tree ties shall be long enough to provide for 3-inches of slack to permit the tree trunk limited movement in any direction. Secure the tree tie with the double-back locking configuration.
- 5. Secure each tree tie with one galvanized nail driven through the tree tie and into the stake to prevent slippage (see Drawings).

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- 6. The staking shall be accomplished by the Contractor in such a manner as to ensure the proper and healthy growth and the safety of the plants, property, and the public.
- 7.Except at tree grates, install Redwood Cross Brace (1" x 4"x 36") between the two stakes on the windward side at each tree. Secure brace to stakes with (4)-6d galvanized nails. Refer to SLO County Public Works Tree Planting Detail M-5.

801-4.8.2 Seed. ADD the following:

1. Turf Seed application rate shall be 2 lbs per 1000 square feet.

To paragraph (2), subsection "a", "Method A", ADD the following:

The soil shall be moist for a depth of 6 inches (152.4 mm) before planting. If not, prior to planting the soil shall be watered to a depth of 8 inches (203.2 mm) and allowed to dry out to the point soil is moist and shall support labor and equipment without damage or undue compaction to soil and finish grade.

801-5.1 General. To paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

The contractor shall be responsible for furnishing the labor and materials for the utility connections. Utility connections shall be as shown on the Plan or designated by the utility company.

- ADD the following:
- 1. The installation of the irrigation system shall be in accordance with the manufacturer's instructions unless specified otherwise.

801-5.2 Trench Excavation and Backfill. DELETE in its entirety and SUBSTITUTE with the following:

- 1. Trenches and other excavations shall be sized to accommodate the irrigation system components, conduit, and other required facilities. Additional space shall be provided to assure proper installation and access for inspection.
- 2. The bottom of trenches shall be true to grade and free of protruding stones, roots, or other matter which would prevent proper bedding of pipe or other facilities.
- 3. Trenches and excavations shall be backfilled so that the specified thickness of topsoil is restored to the upper part of the trench. Backfill shall be jetted in accordance with 306-12.4, "Jetted Trench Backfill". Other methods of compacting backfill may be approved by the District.
- 801-5.3.1 General. To paragraph (2), sentence (2), DELETE in its entirety and SUBSTITUTE with the following:

The pipe shall be surrounded with SE 50 plaster or mortar sand material per 200-1.5.5, "Sand Gradations".

To Paragraph (3), ADD the following:

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Irrigation mainlines, valves, and supporting equipment shall be located in the planting areas. Unless otherwise specified no parallel pressure pipelines shall be installed within 1 foot (0.3 m) of each other.

- 801-5.3.3 Plastic Pipeline. ADD the following:
 - main line.
- 801-5.3.4 Brass Pipeline. ADD the following:
 - and fins removed.
- - specified.

 - or grass.
- following:
- following:

 - capped.

4. Tees shall be installed horizontally at the connection with the

1. Brass pipe shall have a straight butt square edge with all burrs

801-5.4 Installation of Valves, Valve boxes, and Special Equipment. DELETE in its entirety and SUBSTITUTE with the following:

1. All irrigation equipment, except sprinkler heads and bubblers. shall be located a minimum of 10 feet (3 m) away from all tree locations. All irrigation equipment, except sprinkler heads and bubblers, shall be placed in shrub beds unless otherwise

2. Valves and other equipment shall be installed in a normal upright position unless otherwise recommended by the manufacturer, and shall be readily accessible for operation, maintenance, and replacement.

3. Valves shall be the same size as the mainline pipe in which they are to serve unless otherwise shown on the Plans.

4. Quick coupler valves shall be 12 inch (304.8 mm) from curbs, pavement, and walks. In ground cover and shrubbery areas, quick coupler valves shall be set flush with finish grade of mulch

801-5.5.1 General. DELETE in its entirety and SUBSTITUTE with the

1. Mains and laterals, including risers, shall be flushed and pressure tested before installing swing joints and sprinkler heads, after which a water coverage test shall be performed.

801-5.7.2.1 General. DELETE in its entirety and SUBSTITUTE with the

1. Pressure testing for leakage shall be performed on newly installed supply lines, pressure mains, and laterals.

2. Pressure testing shall be done with all in-line isolation valves, manifold isolation valves, quick coupling valves and remote-control valves installed. All gate valves and globe valves shall be completely open. Remote-control valves shall be completely open with the outlet side capped off.

3. Irrigation lateral line testing (downstream of the control valve) shall be done with all solvent weld fittings in place. Connections for sprinkler head assemblies (swing joint assemblies) shall be

4. Pipelines installed by trenching and backfilling and pipelines which are completely visible after installation shall be tested in accordance with 801-5.7.2.2, "Pipeline Pressure Test Method."

5.Backfilling of trenches shall not occur prior to pressure testing. Center loading of the pipes is allowed provided all joints are

completely exposed for observation.

801-5.7.2.2 Method A. DELETE in its entirety and SUBSTITUTE with the following:

- 801-5.7.2.2 Pipeline Pressure Test Method.
 - 1. Pressure testing for leakage shall conform to the following procedure:
 - a) Notify the Engineer at least 24 hours prior to performing a pressure test. Pressure tests shall be performed such that the test periods are within the working hours specified in the Special Provisions. The Engineer shall observe each pressure test.
 - b) Before any portion of the pipeline on the supply side of a control valve is backfilled, water shall be turned on into that portion of the line and maintained at full pressure as described in the table below from the water source for a period of not less than 4 consecutive hours after air has been expelled from the line.
 - c) Before any portion of the pipeline on the discharge side of control valve is backfilled, a similar test shall be performed, except the test shall be for a period of 2 hours as described in the table below. Leaks that develop in a tested portion of the system shall be repaired. After the leaks have been repaired, the pressure test shall be repeated. Additional repairs shall be made until no leaks occur.
 - d) The constant test pressure shall be as follows:

Pressurized Mains125 psi (861.8 kPa)4 hoursNon-pressurized Laterals100 psi (689.5 kPa)2 hours

801-5.7.2.3 Method B. DELETE in its entirety.

ADD:

801-5.10 Drip System Components.

- 1. Drip Pressure Regulating Filter. The pressure regulating filter assembly shall be assembled with components in the details, and per manufacturer's instructions.
- 2. Drip Air Vacuum Relief Assembly. The drip air vacuum relief valve assembly shall be assembled with components in the details, and per manufacturer's instructions.
- 3. Drip Flush Valve Assembly. The drip flush valve assembly shall be assembled with components in the details, and per manufacturer's instructions.
- 4. Dripline, Fittings and Staples. The dripline shall be installed with components in the details, and per manufacturer's instructions.
- 5.Drip Operation Indicator. The drip operation indicator shall be installed with components in the details, and per manufacturer's instructions.

801-6 MAINTENANCE AND PLANT ESTABLISHMENT. DELETE in its entirety and SUBSTITUTE with the following:

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- 1. Maintain all planted areas on the continuous basis as they are completed during the progress of the Work and during the Plant Establishment Period (PEP).
- 2. Mowing of lawn areas shall be as specified in 801-4.8, "Lawn Plantina".
- 3. Any required pruning of plants shall be designated by the Engineer at the start of the PEP. Perform the pruning as part of the plant establishment Work.
- 4. After all planting and related Work has been completed in accordance with the Contract Documents, request a pre-maintenance inspection from the Engineer. All Punchlist items shall be completed prior to the start of the PEP.
- 5. After planting is completed, a field notification shall be issued to establish the effective beginning date of the PEP.
- 6. The PEP shall be as specified in the table below unless otherwise specified in the Contract Documents.

Permanently Irrigated Plants and Sod Installation	90 Calendar Days
Seed or Stolonized Lawn Areas	120 Calendar Days

- 7. Unless otherwise specified, the Resident Engineer and Project Biologist will determine that the PEP has been successfully completed when the following conditions have been met:
 - a) Site is erosion free.
 - b) 100-percent container plant survival.
 - c) Zero-percent weed and invasive plant cover.
 - d) Best Management Practices (BMPs) are in good condition as determined by the Resident Engineer.
- 8. The PEP shall be extended by the Resident Engineer if additional planting is necessary to achieve the required success criteria above or if other corrective Work becomes necessary.
- 9.Dead, damaged, unhealthy, and otherwise unsatisfactory plant materials shall be replaced within 2 weeks from the Engineer's notification.
- 10. Upon completion of the PEP, a final inspection shall be performed by the Engineer. If the PEP is satisfactorily completed ahead of other Work included in the Contract, the maintenance of planted areas shall be continued until all other Work has been completed.

801-6 MAINTENANCE AND PLANT ESTABLISHMENT (Cont.).

1. Maintenance shall be performed weekly or as directed by the Engineer and shall include irrigation inspection and repair, Site cleanup, pruning of groundcover, shrubs, and trees, mowing, weed control, fertilization every 4 weeks in accordance with 801-2.2.2, "Fertilizing and Conditioning Procedures", pest and fungi control, plant replacement, and mulch replenishment.

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2. The contractor is responsible for the scheduling of Work throughout the duration of the Contract. Early installation of landscape planting does not relieve the contractor of planting and irrigation maintenance responsibilities prior to the completion of construction and Final Acceptance by the District. Should the PEP lapse prior to Final Acceptance, the contractor shall maintain planting until completion and Final Acceptance.

ADD

- 801-6.1 Warranty & Replacement.
 - Special warranty: All plant material 15-gallon size and larger shall be guaranteed to live and grow in a healthy condition during the Contract Period, Maintenance Period, and for a one (1) year period from the date of final acceptance. The Contractor shall not be held responsible for failure due to neglect by the District, vandalism, etc. during the guarantee period. Contractor shall report such conditions to the District immediately in writing.
 - 2. Special warranty: All plant material smaller than 15-gallon size shall be guaranteed to live and grow in vigorous, healthy, and upright condition for a minimum of ninety (90) days after final acceptance of work (excluding seasonal color if applicable).
 - 3.Replacement: All plants not healthy and in a vigorous growing condition as determined by the District shall be replaced immediately during construction, and the maintenance and warranty periods. Plants used for replacement shall be the same kind and size as specified in the plant legend as shown on the drawings. They shall be furnished, planted, and fertilized as originally specified at no cost to the District.

801-8 PAYMENT. DELETE in its entirety and SUBSTITUTE with the following:

801-8 MEASUREMENT.

1. Landscaping and irrigation Work shall be measured as specified in the Contract Documents and as shown in the Bid.

ADD:

801-9 PAYMENT.

2.1. The payment for landscaping and irrigation Work shall be included under the lump sum Bid items or for the Contract Unit Prices shown in the Bid and shall also include the payment for the Plant Establishment Period Work.

